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A CONFERENCE ON OPPORTUNITIES FOR WOMEN EMPHASIZED THE EDUCATIONAL AND TRAINING REQUIREMENTS FOR EMPLOYMENT IN THE FIELDS OF TEACHING, SOCIAL WORK, HEALTH SCIENCES, MATHEMATICS, PHYSICAL SCIENCES, ENGINEERING, AND LIBRARY SCIENCE, AND OPPORTUNITIES FOR CONTINUING EDUCATION IN UNDERGRADUATE LIBERAL ARTS. THE MORNING ADDRESS DESCRIBED THE SARAH LAWRENCE COLLEGE CENTER FOR CONTINUING EDUCATION, ITS CONSULTATIVE SERVICE, SPECIAL GRADUATE AND PROFESSIONAL SCHOOLS AND RESEARCH. DEANS OF THE UNIVERSITY OF MICHIGAN SCHOOLS OF MEDICINE, SOCIAL WORK, AND EDUCATION COMMENTED ON OPPORTUNITIES FOR WOMEN IN THEIR FIELDS. A REPORT FROM THE UNITED STATES CIVIL SERVICE COMMISSION URGED ATTENTION TO PROJECTED FEDERAL CAREER GOALS, CONTACTS WITH PLACEMENT PERSONNEL, AND EMPHASIS ON IDEALS OF SERVICE. THE WORKSHOP ADDRESS FOCUSED ON SPECIFIC JOBS AND PROFESSIONAL AREAS, WITH QUESTIONS AND DISCUSSION LARGELY DEVOTED TO ADMISSION CRITERIA, COSTS, CERTIFICATION, AND COURSE SCHEDULING. AN ANNOTATED BIBLIOGRAPHY OF BOOKS ON WOMEN'S REENTRY INTO THE WORKFORCE IS PROVIDED AS WELL AS LISTS OF BOOKLETS AND MAGAZINE ARTICLES AVAILABLE IN LOCAL LIBRARIES. (LY)

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Opportunities for Women through Education

Conference-Workshop
PROCEEDINGS

CENTER FOR CONTINUING
EDUCATION OF WOMEN

The University of Michigan

AC000316

OPPORTUNITIES FOR WOMEN THROUGH EDUCATION

PROCEEDINGS
of the
Conference-Workshop

March 16, 1965

CENTER FOR CONTINUING EDUCATION OF WOMEN
Michigan League, The University of Michigan, Ann Arbor

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FOREWORD

Continuing education is a concept with which The University of Michigan has long been familiar, through its programs of postgraduate and adult education in fields of both professional practice and "general education." Establishment of the Center for Continuing Education of Women, in September 1964, was yet another step in the University's tradition of recognizing and meeting needs as they develop.

In a population increasingly urbanized and in a civilization increasingly mechanized, it is only to be expected that the need for more educated people will also grow. This need is both quantitative and qualitative.

Ever since it admitted its first woman student in 1870, The University of Michigan has recognized women as people. Today it realizes that an essential part of the program to prepare more educated people for the needs of our automated world is the continuing education of women. It was to facilitate such preparation that the Center for Continuing Education of Women was established. And it was to explore the possibilities of various kinds and degrees of educational and vocational opportunities for women that the March 16 conference was called.

To those who participated in the conference, I extend my personal best wishes and express the eagerness of The University of Michigan to do all that it can to further your educational progress.

Harlan Hatcher

Harlan Hatcher, President

INTRODUCTION

History

The Center for Continuing Education of Women at The University of Michigan opened September 1, 1964 after almost two years of preliminary preparation. Women in Michigan, as in other parts of the country, already had indicated keen interest in further education, particularly for professional or sub-professional jobs. The University of Michigan Alumnae Council had appointed a committee to study the question of continuing education for women. The same topic was discussed by the Higher Education Committee of the Ann Arbor branch of The American Association of University Women.

In May, 1962 Louise Gilbert Cain wrote a proposal recommending that The University of Michigan create a new office to assist adult women who wish to return to academic studies. The enthusiastic acceptance of her report by Roger W. Heyns, then Vice-President for Academic Affairs, was the original impetus in the establishment of the present Center. By February, 1963, Mrs. Cain was appointed Special Assistant to Vice-President Heyns to plan University action.

In preparation for the opening of the Center for Continuing Education of Women on the Michigan campus, Mrs. Cain attended conferences and meetings, held interviews, and made personal investigations covering all aspects of continuing education for women. Geographically, her area of study extended from Boston to San Francisco. In Washington, for example, she consulted members of the Women's Bureau of the Department of Labor, the President's Commission on the Status of Women, the AAUW Educational Foundation, the National Institutes of Health, the Office of Education, the Department of Health, Education, and Welfare. Her activity included the pursuit of common concerns with Catalyst, a new nation-wide agency for utilizing the resources of educated, mature women. She also observed the operation of the Minnesota Plan, the Center at Sarah Lawrence College, and the program for Independent Study at Radcliffe College, three pioneers in the field of continuing education for women.

In addition to consulting educational authorities and leaders, Mrs. Cain worked with the Alumnae Council in surveying the interest of women alumnae of the University. Preliminary questionnaires were used experimentally in local groups in Ann Arbor and in other communities; later, 1601 were distributed to thirty-six alumnae clubs. The tabulation of the returns indicated that 61% wanted more education, and of those highly motivated, 75% wanted degree programs. A substantial majority wished to pursue programs leading to a master's degree. These women alumnae were primarily interested in further training in education, social sciences, social work, nursing and health fields, and physical and biological sciences. They believed that the lack of adequate counseling was a primary barrier to their returning for further education.

The need for such a Center at The University of Michigan became increasingly apparent as women throughout southeastern Michigan indicated their support for the project. Many individuals gave valuable volunteer assistance. Several hundred came to the office or phoned for consultation about educational plans long before the Center was officially established. During the period when plans for the Center were in progress, the original proposal was subjected to careful evaluation by an Advisory Committee composed of deans and faculty members representing the special interest fields indicated by the alumnae survey.

In May, 1964, Mrs. Cain summarized the recommendations for opening the Center:

> "The University of Michigan proposes to establish a visible facility on the campus to assist the University:
>
> a) in the preliminary steps of giving information about University programs and requirements to the adult woman who wishes to resume her interrupted education; and in advising her in her educational planning in the frame of reference of her continuing home responsibilities and her objectives for which the University program of study will be a preparation, and
>
> b) in working with the administration and faculty to achieve further flexibility in University programs and requirements to take maximum advantage of the resources and needs of this special sector of returning students."

As in all innovations on the educational scene, financing a new Center was a major hurdle. Decisions concerning staff and office space were possible, however, in July of 1964 when Harlan H. Hatcher assigned $15,000 per year for a three-year period from The President's Fund so that the Center could begin operation in the fall of 1964.

The Alumnae Council Committee for the Center also assumed a major responsibility for securing financial support. In September of 1964, when the Center opened, the Alumnae Council embarked on a project to raise $45,000 over a three-year period so that an increased annual budget could enable the Center to fulfill more adequately the counseling needs of returning women students.

At the time of the Center's opening, Mrs. Cain, who had devoted so much time and energy to the planning of the Center, was living in Washington where her husband is currently in government service. Three members of the present staff of the Center were members of the small advisory group who had closely followed plans for the Center through all the preliminary stages.

The Center at The University of Michigan differs significantly from other pioneers in the field. The Minnesota Plan, beginning in 1960, has included a number of non-credit seminars which in some cases serve as a transition back to programs of formal academic study. The Radcliffe Institute, also started in 1960, offers an opportunity for women to keep in contact with their professional fields through independent research or creative projects carried on concurrently with their domestic and community obligations. This Institute is not concerned with classes, examinations or credits. At Sarah Lawrence, the Center intended to open in September, 1962, but set up a temporary office the preceding April as a result of the overwhelming demand of women in this New York suburban area for continuing their education. This Center now occupies a separate building in which special classes, parallel to the regular college curriculum, are held for part-time women students. These classes must be supplemented by regular courses if a woman is accepted as a candidate for a degree.

The Center at The University of Michigan so far has offered no special courses or seminars, but rather has tried through individual counseling to enable women to use the vast educational facilities already in existence. These include the undergraduate College of Literature, Science, and the Arts, and fourteen additional professional schools and colleges on the Ann Arbor campus, as well as the offerings of the Dearborn campus, Flint College, and the Extension Service.

The major event of the first year of the Center's operation was the conference on "Opportunities for Women through Education" attended by 238 women, which was held on March 16 at the Rackham Building on The University of Michigan Campus. Advance news of the conference was circulated by personal letters and announcements to women's clubs and alumnae groups. Through these channels, programs for the conference were distributed and brought 610 responses. General publicity was postponed to coincide with the date of the conference. The size was limited to encourage a profitable exchange of ideas among those participating in the workshops.

Conference members were invited to bring questions about continuing their own education to the workshop sessions held in the afternoon. In these meetings, faculty and staff members of The University of Michigan were present to provide information about training programs at the University and employment opportunities in various fields. The participants selected booklets and pamphlets to add to their conference kits, further amplifying the vocational information presented in the conference meetings. Catalogues and course information of all the nearby universities and specialized schools, as well as The University of Michigan catalogues, were available in every workshop.

Most of the conference participants were between thirty and fifty years of age, were wives of academic and professional men, and had bachelor's or higher degrees. Although the majority of the participants came from Ann Arbor and the Detroit metropolitan area, the geographical range included Chicago, Toledo, Cleveland and other parts of Ohio, as well as the entire lower peninsula of Michigan. A complete roster is included at the end of these proceedings.

Helen Hornbeck Tanner
Assistant Director
Center for Continuing Education of Women

THE UNIVERSITY OF MICHIGAN

CENTER FOR CONTINUING EDUCATION OF WOMEN

Staff, 1964-1965

Acting Director - Jean W. Campbell
Assistant Director - Helen Hornbeck Tanner
Secretary - Joan F. Carlson

Executive Committee

- Howard S. Bretsch, Associate Dean of the Graduate School
- John S. Diekhoff, Professor of Higher Education
- Fedele F. Fauri, Dean of the School of Social Work
- William Haber, Dean of the College of Literature, Science, and the Arts
- Roger W. Heyns, Vice President for Academic Affairs, ex officio
- William N. Hubbard, Jr., Dean of the School of Medicine
- Charles F. Lehmann, Associate Dean of the School of Education
- Rhoda R. Russell, Dean of the School of Nursing
- Mabel E. Rugen, Professor of Health Education

Alumnae Council Committee for the Center

Mrs. Edward L. Cobb, Jackson, Chairman

- Miss Arlie Bennett, Kalamazoo
- Mrs. William Burlingame, Birmingham
- Mrs. Ralph Byers, Ann Arbor
- Mrs. John Donovan, Nyack, N.Y.
- Mrs. William M. Emery, Winnetka, Ill.
- Miss Marion Galton, Battle Creek
- Mrs. Allen Gutchess, Toledo
- Mrs. Frederic Heller, Ann Arbor
- Mrs. Rensis Likert, Ann Arbor
- Mrs. Edward Stewart, Havertown, Pa.
- Mrs. Byron L. West, Toledo
- Mrs. M. H. Waterman, Ann Arbor
- Mrs. G. Ronald Innes, Chicago
- Mrs. G. T. Christiansen, Birmingham
- Mrs. Henry E. Dawkins, Royal Oak
- Mrs. Ivan S. Doctor, Pleasant Ridge

THE MORNING SESSION

Jean W. Campbell, Acting-Director, Center for Continuing Education of Women:

I would like to welcome all of you, our honored participants in this morning's session, faculty and staff members and guests, and you who have come today to learn about opportunities for women through education at The University of Michigan. We are proud to have you here. We hope that for many of you this day will prove to have been a significant step in your educational planning.

The University of Michigan has responded to the educational challenge embodied in the changing pattern of women's lives with interest, sympathy, and a will to serve. This spirit is symbolized by our very forward-looking Vice-President, Roger Heyns, who is here to welcome you.

Roger W. Heyns, Vice-President for Academic Affairs, The University of Michigan:

It's a pleasure to present the official welcome of The University of Michigan. This is a significant moment in the brief history of our Center for Continuing Education of Women and we are delighted to have you join in it. I want to take this occasion to do two things. One is to make a few observations about the complex nature of our university. Some comments seem particularly appropriate right now when so many people, so many publications, and so much of our mass media are raising questions about the function of a university, or calling attention to discontent among certain segments of our population of universities. It occurred to me that it might be useful for you women who are here to know that you are part of the current problem. This conference reflects a genuine sense of responsibility on the part of a complex university. It is but one illustration of the increased pressures on the university to serve a particular segment of the population, or the nation at large. Among these pressures is the demand from all of the professions to provide continuing education; for example, in law, in medicine, in social work, and in public health.

Formerly, the general impression prevailed that a university was completely absorbed with the instruction of undergraduates. This notion has changed abruptly since World War II. Although the university has a traditional dedication to undergraduate education and intends to continue this emphasis; at the same time, it has acquired a large set of additional responsibilities. As a result, "Old Main," the little ivy-covered building, as a symbol of a university is very much out of date. We all have to understand that a university is responsible to numerous persons, agencies and groups; and these new responsibilities have created some imbalances requiring readjustment of our resources. You people are in a position to enlarge the general understanding of the nature of a complex university and its numerous responsibilities, because you represent an important new segment of the university population and a new set of responsibilities.

At this time, I also want to express for The University of Michigan, appreciation to many people who are responsible for this particular conference. I start with such individuals as Mrs. Cain,* who, along with some of her confreres in Ann Arbor, questioned the adequacy of the University's response to the need for continuing education of women. The initial inquiry led to a long series of discussions in the University community. Ideas which achieve important fruition don't just "happen." They have to be initiated by someone, then be evaluated carefully. For their important service in evaluating this new idea, I would like to thank the Executive Committee that is listed in your program. These are people with responsible positions in the University who promoted the creation of the Center for Continuing Education of Women by approving it and recognizing its validity, even though there were many competing demands on the resources of the University.

I would like to commend Mrs. Campbell and Mrs. Tanner and their associates for arranging this conference and for the leadership they have given to the Center. I think we ought to recognize the Michigan League Board who have provided us with space for the Center's office. There was real vision on the part of the alumnae association members who guaranteed to underwrite part of the costs. Continuing education for women is a field which has interested President Hatcher and, indeed, a substantial amount of the money that is currently supporting the Center comes from his personal Presidential Fund. We appreciate his devotion to this particular cause.

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*Mrs. Louise Cain was a Special Assistant to Roger W. Heyns, Vice-President for Academic Affairs and was the first director of the Center for Continuing Education of Women at The University of Michigan.

Finally, let me turn attention to this audience itself. We look to you in our endeavor to understand and to define more clearly what educational service the University should provide—indeed, what the mission of the Center for Continuing Education of Women ought to be. So you, in reality, are a part of the process of defining our goals and allocating our resources.

It's with real pleasure that I welcome you and express the hope that you have a productive day.

Jean W. Campbell:

We have looked forward with such interest to our guest speaker of the morning. Mrs. Raushenbush has just this spring been appointed president-elect of her college and has been talking to the press and been talked about by the press in rewarding amounts—rewarding, in our view, to the cause of continuing education for women.

Mrs. Raushenbush has been a part of Sarah Lawrence College since 1938 when she joined the staff as a teacher of English literature. She has been an innovator, a counselor of educators, a writer, and in the last three or four years, has been director of the Center of Continuing Education of Women at Sarah Lawrence. This Center was one of the first programs designed especially for women returning to school after some interruption in their educational programs. We are indeed honored to have with us a woman who has been so involved in this program, one who is a realist and knows that it takes more than establishing a Center for Continuing Education of Women. It takes knowing what to do about it, what works, what does not work, and what problems arise. Mrs. Raushenbush is here to help us examine some problems in planning for the continuing education of women and to challenge us with some opportunities, as she sees them, for the large university.

PROBLEMS, POSSIBILITIES AND PROSPECTS in the CONTINUING EDUCATION OF WOMEN

by Esther Raushenbush

American education is a fascinating history of stubborn adherence to habits once formed and now cherished, and of eagerness to find ways of using new knowledge and of making the experience of learning vital to the intelligence and lives of students. Most of the time, when we have made changes in education, we have been concerned with devising new ways of teaching an existing student body, or of fitting a new kind of student into an ongoing system.

Now we must consider how to create a new educational design to meet the needs of a new population of students—a population that a few years ago did not exist at all, that has grown to great proportions in recent time, and that will, in the foreseeable future, if we are intelligent about providing for it, constitute an enormously important part of the student population and the professional life of this country.

I am talking about women who did not finish their undergraduate college education, or who did not undertake professional training, and who after an absence from study for a number of years, wish to complete their undergraduate or professional training. Typically these are women who have been engaged for from 10 to 20 years in bearing and rearing families. There have certainly been such women in the past, and they have been filtered through educational programs created for quite different students, and have managed to reach their goals. They have often accomplished this under great disadvantages; their numbers have been relatively small; and little effort was made to discover what kind of education would make the best use of the talents of such women.

In the past few years, the number of women who wish to do this has grown so remarkably that we can no longer consider them as isolated cases of individuals seeking an education at an unusual and dubious time of life, to be more or less reluctantly fitted into systems created for young people in their late adolescent or early adult years, whose sole business is study. There are now so many that, reluctant as most educators are to alter plans that have comfortably suited them in the past, this new student population will force us to create for them an educational design that is appropriate for them. The fact that we find they can compete with the 18-year-olds, that they can, indeed, meet the same demands we make of the young student, does not mean that setting the same requirements, fitting them into the same educational pattern as the young students necessarily provides the education most appropriate for their needs. There are many such students now so our first responsibility is to discover enough about who they are, what they want, what they can do, what is appropriate for them to do, and plan their education on the basis of this much knowledge about them.

The term now commonly used for programs for this population is "continuing education." This is the name given to your project here; it is the name of the Center at Sarah Lawrence College which I head. It is not a precise term—even less precise than "general education," which entered fully upon its amorphous career as a descriptive term fifteen years ago; and it is more inaccurate. When we talk about continuing education we are almost always talking about resumed, or non-continuous education. Its non-continuity is, indeed, its most important characteristic. The term includes many kinds of people, with many kinds of purposes, undertaking many different kinds of education.

I am using the term to describe a particular educational enterprise, one of the versions of "continuing education." I am concerned here only with women who wish to resume an undergraduate college education, for a professional purpose. This is not to underestimate the importance of what is better known as Adult Education—study with or without college credit, which people undertake for their pleasure or profit. It does not underestimate the importance of creating new educational designs for men as well as women—and indeed there are many programs allowing men to resume their liberal arts education, especially those developed in conjunction with their work by large industrial and financial institutions—young executives who take time out of their upward moving business lives to study Plato or foreign affairs or social psychology. Limiting the discussion of continuing education to women who have had all or part of a college education does not, either, underestimate the importance of the needs of men and women who did not complete their high school education, or even elementary education, and who should resume it. But all these aspects of education are outside the scope of this paper.

I am hoping that in time education for women will truly become continuous, in the sense that when their college or professional education is interrupted by marriage and child bearing (the most frequent cause of an abandoned education), ways will be available for a student to keep in touch with her field, not leave it altogether. But we are not there yet.

There are two audiences for a conference such as this: prospective students, and the men and women who are responsible for designing education. We need to speak to both, because the problems and possibilities experienced by women who undertake to resume an interrupted education are of great importance both to them and to educators; and the problems, possibilities, and prospects educators are discovering, and will discover if they are bold enough, will be of tremendous consequence to the women seeking to resume an interrupted education.

First, a case study of a single program, now in its third year.

In 1962, the Center for Continuing Education at Sarah Lawrence College was established. The population it was intended to serve was clear from the beginning: they were women who had had at least one year of college study, who had been out of college at least five years and now wanted to complete their undergraduate education; and also women who had completed their undergraduate education and now wished to undertake graduate or professional training. We were interested in people who were eager to study, but could not fit comfortably into existing programs either because the programs themselves were not appropriate or because their own life design made these programs unsuitable or impossible for them. We were interested in highly motivated people, usually women with families, who wanted to study but could study only part-time, and who were therefore barred from many of the best professional programs. We know it was not reasonable to equate high motivation with full-time study.

We were interested in discovering as much as we could about the qualities of such women as students, and what kind of education seemed appropriate for them. We have learned a good deal about the first, and are only now probing the possibilities of the second.

This program, as it has developed, has four parts to it, and you will understand best the experience of women who have participated in it, and who, I am sure, are representative of hundreds of women interested in resuming their education, if I describe how each part has worked in our three years of experience.

The first part is the consultation service. Any woman who has had at least one year of college study, and who is considering resuming either undergraduate or graduate study, is eligible to ask for consultation. We cannot do general personal or vocational counseling; we are not equipped to be much help to women who have only a vague notion that they would like to do something interesting, but have no idea at all of what they would like to study, or what work they might like to pursue. Ours is an educational counseling service; and although personal and vocational counseling obviously crowd closely upon educational counseling, we try to draw such obvious lines as we can. The woman whose studying in college was interrupted and who wants to resume it for some purpose, and the woman who completed her undergraduate studies and wants to go on to graduate or professional training after an absence of some years. Often the person who still needs undergraduate study is not certain what she might do, either with the bachelor's degree, or with subsequent graduate study, but she has some notion of her interests and some range of possibilities in mind. For her, we can serve to help explore these possibilities, set her on the road to discovering whether her interests and expectations are reasonable and feasible for her. Sometimes she knows what kind of work she would like to do but does not know by what name it would be called. The woman thinking about graduate study may be uncertain whether she wants to teach in a high school, or whether she should consider the possibility of teaching in a community or junior college, or a four-year college; or whether her talents should lead her into social work, or public health; whether she should prepare for paid professional work at all, or study to prepare herself for community work on a high level, or political activity, as a trained and competent citizen.

In three years we have interviewed about 800 women.

The second part of this program is the special undergraduate courses for Continuing Education students. We have established courses that parallel the regular courses in our curriculum. They are taught by our faculty and they give the same amount of credit as our other undergraduate courses. Since all the students in this program come to us with at least a year of undergraduate credit, and none of them are "advanced" students, the courses we offer are in the general, intermediate range of courses suitable for most students seeking a liberal arts degree. We established courses in subjects we knew would be suitable for any intelligent person who wanted to study, and had not studied for some time—courses in literature and history, in psychology, foreign affairs, sociology, comparative religion.

Standards and expectations are the same as those in the college—these are rigorous and demanding courses, and we caution faculty against tempering the winds. Students are given a good deal of help in getting started studying again, but they are expected to meet good college standards. Classes are small—we limit them to twelve students each. They are conducted as discussion courses, and all students have individual conferences each week or bi-weekly. All students are expected soon to start working on some individual reading in addition to the work for classes, and develop as quickly as possible the ability to work on their own. All courses offer five credits a semester, and students are expected to spend not less than 15 hours weekly on a course. All students just resuming study are encouraged to take only one five-credit course at a time. It is a program for part-time students only—a woman whose life makes it possible for her to spend full time studying should enter a program requiring full-time study.

It is the purpose of these courses to help women who have not been studying regularly to re-establish the habit of studying, to give them time and occasion to consider the possible directions for themselves; to work with other women who are in the same academic situation as they are, with some of the same kinds of life experience, and of somewhat the same age. These students are not "extras" or oddities or exceptions in a classroom filled with 17 or 18-year-olds. They do not have to work at the problems connected with learning how to study, and how to fit studying into a complicated on-going personal life, among young people whose main job is study. They are working in a program designed for them and people like them. We wanted to conserve their time, so that all the time they had for education could be spent on education—not on hours of travel. We scheduled few classes, much longer classes than one ordinarily finds in college schedules, meeting fewer times a week—so that the traveling time that would be spent in coming to the Center three times a week would be cut by two-thirds, when there was only one class a week. No class starts before 9:30, and none lasts later than 2:30—the hours the children are in school.

After a year of study in the special courses, students may ask to matriculate, and if they are accepted, may then enter any appropriate courses in the college as candidates for a BA degree. By then they have become familiar with studying; they have walked about the campus and have used the library; they have begun to be assimilated into the college. They may continue to take courses in the continuing Education program if they wish—up to 40 credits can be earned there—and they rarely move out of the program with only the ten credits they have earned the first year. Some move into the college courses and come back for a course or two at the Center later; some take one course in the college and one at the Center.

They develop a wonderful esprit de corps at the Center; they have common purposes, common difficulties, common satisfactions. Every one of them undertakes study with apprehension—there seems to be a notion abroad that one's intelligence diminishes, one's brains become recalcitrant and will not work. Even women who have led complicated personal lives, who have worked in political campaigns, have done demanding volunteer work, are always afraid that they cannot think, or concentrate, or remember. And learning to study again is not easy—but given intelligence and motivation, and the opportunity to study in ways that will use intelligence, exploit motivation and give the best opportunity possible, by interchange and discussion, by individual confrontation with a teacher, to break through the barriers of time, such students do fine work.

I had great difficulty persuading our faculty to teach these Continuing Education courses at first; but after the first year, indeed after the first semester, I had no difficulty. These teachers who had been used to students between the ages of 17 and 21 were doubtful about students over 30 who had not been studying for ten or fifteen or twenty years. But they have found them exciting and dedicated and demanding students, and now I have no difficulty staffing these classes.

At Sarah Lawrence, we have an attractive physical Center—a small building, a converted four-car garage, where classes are held and where the people work who administer the program. There is a small lounge where women come to read or to talk and have coffee before and after classes. This adds to the educational process. They are working out ways of living and working, most of them, now, with some plan for work that will occupy them when they finish studying, and that will involve arranging the time for that and for husbands and children and the on-going life of the home. They talk about how their return to study has affected their children, and speak surprisingly often of how the school work of the children had improved since the mother began to study, too. Husbands are cooperative and interested—indeed the principal personal question we ask women when they begin to plan for resumption of their studies is: How does your husband feel about it? And if the husband is negative, we advise caution in making a decision to begin. The exchange of ideas and experience in study as these women talk with each other advances their education; as does the exchange of ideas and experience with their on-going lives.

The third part of our program is our collaboration with university graduate and professional schools in establishing special graduate programs. In counseling women during our first year, we encountered many who, we thought, would make excellent teachers, but who could not meet the schedule requirements of graduate and certification programs in the metropolitan universities. In some cases the problem is the requirement for full-time study—for instance, although students can work on a part-time basis toward a Master's degree for high school teaching at Teachers College at Columbia, they must study full-time for an elementary school certificate and the Master's degree. The enthusiasm of Columbia University for keeping young men from stretching out their graduate study needlessly has caused the university, in the past few weeks, to change its tuition in such a way as to make part-time study far more expensive than full-time study, thus making it almost prohibitive for the women we are talking about to study there.

The difficulties with other present programs in our community are the late afternoon and evening hours at which courses for part-time students are held—hours good for people who work outside their homes, but not for those whose work is inside. Many students can ill spare the time it takes to travel into the City two or three times a week for a single course.

Moreover, we were interested in exploring the possibility of developing training programs especially appropriate for this particular student body—not assuming that merely transplanting established courses to a different time and place is the way to provide education for them. These students have a different view of life from the usual undergraduate, a different life experience, a different way of responding to the study of philosophy or literature or child psychology, or sociology. Working with such a group, not dispersing them among the young students at once, may tell us something about possible educational procedures, possible organization of the curriculum and of individual courses and of the kind of requirements we would make for them that might be different from those we make for the young student.

We have tried to put these thoughts into action. When we knew we had an able group of potential teachers who had had a liberal arts education, and a Bachelor's degree, we approached the New York University School of Education with the proposal that they set up an experimental program at our Center especially to train this group as elementary school teachers. This program is now in its second year—one group of fifteen students are now in their second year, another began this year. Students come to the program through the counseling we give at the Center and are recommended to the University by us. The University offers the courses at the Center, provides the faculty, gives the credit and awards the Master's degree. As the program develops, it is being re-designed with these particular students in mind-mature women, all of whom have had families, all of whom will be teaching in our community, many of whom have had wide experience in the community. We believe a new and appropriate teacher-training program for such women will develop from this experiment.

A second experimental program has been established by the School of Social Work of the University. Scores of able women, with talent and experience that would make them excellent social workers have been unable to undertake training anywhere in our community because the social work schools have been adamant about full-time study. A group of 30 women are now in the first year of a part-time pilot program for the Master's degree in Social Work that will take four

four years to complete instead of the customary two. As with the undergraduates and the potential teachers, satisfaction in teaching these students is high.

What about the students? What do they accomplish, and what do they report about their experience? Their academic records are very good. No student in our undergraduate program has failed a course; their ratings are consistently in the upper half of the scale of acceptable grades. They have great staying power. Of the first group of students admitted to our undergraduate program, now in its third year, only five have dropped out—one had a baby, two moved away, one became ill, and one had to leave because her husband was ill. No student was dropped because of inadequate work, and no student left because she was uninterested or unable to do the work. Four will graduate this June—two will enter our Master of Arts program, both headed for Junior College teaching; one will go to a School of Social Work; and the fourth will start toward a degree in Public Health. None of these women was certain, when she began, that she would go on to graduate school—and certainly their present direction was developed in the course of the three undergraduate years in the program.

The fourth part of our program is a small research-and-planning enterprise. We are doing here three things—making an effort to keep some track of the people who come to us for consultation, to discover whether they do indeed undertake study, and what happens if they do; following the educational experience of the students in the programs in which we are involved ourselves; and exploring possibilities for establishing other programs. On the first of these, last April we sent questionnaries to everyone we had interviewed up to January of that year, and had about at 76% response. As to the second, we are keeping records, faculty reports, interview records, of students studying in our own programs for the light it can throw on how this group of students should be educated. As to the third, we are just now conducting an inquiry into the need for trained librarians in our community, into the interest of women in undertaking library training if a suitable program can be established. If it develops that there is both a need for such trained people, and a population that wants the training, we will proceed to discover if there is some way of establishing an appropriate program for them.

This, then, is the case history of a single small-scale effort to create a suitable educational program for a population which needs to be educated, wants to be educated, has both needs and possibilities that are different from those of the usual undergraduate on one hand, and from those of the adult wanting to read or study for his own pleasure and at his own pace, but not interested in professional training.

In our three years' experience, we discovered a number of things—that if one is reasonably intelligent, and really motivated to learn, has intellectual curiosity and the willingness to lend oneself to the enterprise, the years of family bearing and rearing have not imprisoned the mind; that many women who had no idea what they were in college for twenty years ago, discovered somehow in the interval the excitement of learning, and that many did much better, more disciplined study than they had done in college; that the experiences of living in a community, in a demanding world, with husband and children, gave range and depth to learning that 17-year-olds do not have; that such women are potential professionals, who are not just "as good as others" in the field, but who will bring a special quality into their work that other, younger, inexperienced people will not bring.

Such women are indeed worth educating. Now how should we educate them? Here I address myself to my fellow-educators.

We need first of all to untangle ourselves from our prejudices about educating women, and about educating women over the age of 21. We need to withhold the skepticism that says, "there is no use investing time and energy and money in professional training, because they will abandon it." We need, first of all to face the facts—that many intelligent women will indeed require education and professional life that is differently paced and timed than the education of men; that many of them will not have the long stretch of uninterrupted training that men have for their professions, or long years of full-time, uninterrupted practice of the profession that men have, because these women will marry and bear and rear children. We have always, however "emancipated" we are, considered the altar and the lying-in hospital the end of a woman's education and her career. In this period of history it cannot be so, for many women.

We may say whatever we like about early marriage and its bad effect on the professional training of women. Our society encourages early marriage in a score of ways, and we will do little to change it by exhortation or in any other way. Even if we did change it, and the average marriage age went up by two or three years, the difficulties women encounter in following a career of professional study and professional practice would remain. Once we have abandoned the idea that women who become teachers or social workers or lawyers or public health workers or doctors do not marry, but pursue these careers in the same full-scale way and on the same terms as men (who do marry); once we have abandoned the idea that women who do marry do not enter these professions, and do not remain in them—once we have abandoned these ideas, we have to ask this question: How can we create an educational system that will take into account the obvious facts and necessities of the life of an intelligent woman, who has talent for a professional life, and who lives the life that is normal for most women—who marries, makes a home, bears and rears children, and during the years she is so engaged, cannot pursue professional study on the same terms at the same pace that a man can pursue it, or on the terms she could pursue it if she did not marry and have children?

It is time to consider that such women are not isolated exceptions in the life of our time. Only in the past few years have we become astonishingly conscious of their needs, and of the failure of our present educational system to provide for these needs and make use of their talents. Such meetings as this, all over the country, attest to the fact that we are beginning to see that we must provide a suitable kind of education for them. That it is not enough to try to fit them into a system created for an entirely different population with an entirely different life-style. We have to provide new programs in some cases; we must review requirements and discover whether they are indeed appropriate.

What we need is not more patching, not more grudging concessions, not a patronizing attitude toward a population of women who are neither militant competitors with men, nor frustrated housewives seeking relief from their frustration, but intelligent adults whose intellectual and personal needs require that their intellectual and personal talents be trained and used in new ways, at a time of life for which our educational system was not designed. Let us remember that higher education as we know it was created for the sons of gentlemen who would enter the law, or the ministry or service to the state. That system has been slowly, and often not very intelligently, modified for a population of young people never remotely conceived of when our colleges and universities took shape. It needs modification now for a serious and able and needed population of women who are returning to our educational institutions.

What might be the special function of a great university in the education of returning women? If my fairy godmother said, "You may set up whatever kind of educational program you want for such women as these, and I will bring it to pass. Now what will you do?"

I would go to work. I would select a large, superior university, located in a community large enough, urban enough, cosmopolitan enough to have a population of educated, or partly educated, women who want to undertake professional training. Since our time is short this morning, let us confine ourselves to carrying out that part of my fairy godmother's permission that concerns women who have already finished college, and who want to undertake graduate or professional training. This university we will call Erewhom University, and any resemblance to any other university is purely coincidental.

Erewhon University, the university I have selected as my model likes to perpetuate its kind, as do others. It has a splendid Ph.D. program for people who want to become college professors, who will do literary or historical research, write books and papers, become eminent as research scholars, and who will also teach students, undergraduates when they have to, graduate students when they can.

I would remind the faculty of Erewhon that there are thousands of students headed for college (theirs and others) who need much better teaching than they are getting in many institutions, and better than they will get as the number of students continues its astronomical rise and the number of teachers, in proportion, its present decline. I would remind this faculty of the increasing number of students who will begin college and not finish, and the even greater number who will be studying in our two-year community and junior colleges all over the country. I would suggest that these two-year colleges could and should become great teaching institutions—places where students who may never have more than these two years can be introduced to the life of ideas, can be given the experience of learning, of speculating, of considering serious questions, of discovering the past and exploring the present. I would suggest that among intelligent and educated women are many who would be great teachers for such institutions, and it might behoove Erewhon University to give some sober thought to how a graduate program might be established that would train such women for teaching in these colleges, and at the same time not ignore the fact that they have obligations that in terms of both their present and their future life, make it unlikely that many of them will embark on the usual Ph.D. program for producing historians or literary scholars or economists. I would urge the university to consider the talents of such women, their life style, the qualities they could bring to the teaching of students, and consider, also, whether it might not be to the interest of the university to give some thought to educating them in particularly appropriate ways, as graduate students. I am not concerned with what degree the university ultimately gives such students—and if it fears to corrupt the Ph.D., it certainly should not be that one. But perhaps the Ph.D. has had a corner on the teaching market which it might consider, in view of the serious needs of our time, inviting others to share. I do not think this means lowering standards, or weakening prestige. I think it means recognizing that our proud boast that we are a nation that educates all its people, not only a few of the most talented, is bearing fruit.

We are committed to educate, and should be committed to educate well, millions of young people who, in another country would not be educated at all beyond the elementary or high school years. We need to explore all possible ways of educating them, and all possible ways of training people to educate them, and all possible sources of good teachers to teach them. Erewhon University might particularly consider this question.

But finding ways of training teachers is simple compared with other tasks. I would ask appropriate people in Erewhon to consider what professions in our society are most appropriate for women to pursue. Many people would at once object to making any such distinctions between professions for men and professions for women—but we obviously make them all the time. Teaching is an obvious profession, and social work, and certain others that you are considering here. I would ask competent people to point out the fields where especially effective and high level work can be performed by women who are trained in the biological sciences (as well as in the social sciences)—in public health, population control, laboratory research and clinical work. I would ask the law professors to consider in what aspects of the law women might work most effectively, and whether any changes might be made in legal training to exploit their particular interests and talents. I would stop worrying about whether women make as good doctors as men, or being skeptical about whether they would stay with it, and consider what, in the field of medicine women might be uniquely fitted to do—because surely there are some kind of practice that women are more suited to than others. I would urge the men who are responsible for the medical school training to consider with open minds whether training can in any way be made more appropriate for women who have family responsibilities; and thus, perhaps, encourage able young women to undertake the risk of medical school, and to stay with it, once they have begun.

I would ask the people of Erewhon not to assume that full-time motivation for professional study must be equated with full-time study. I would be confident that, if Erewhon University chose its students carefully, it would find among women excellent potential candidates for professional training and practice in many fields, for whom the usual educational design is impossible. When the university had settled upon some fields in which it would be willing to commit itself to the training of such women, I would urge that a small group of administrators and professors in these fields set to work to design programs that would be suitable for this population. Not programs with lower standards. Not short cuts. Not poor substitutes. But demanding and high-quality programs that would give such students opportunity to use their time and energy fully, and not force them to undertake inappropriate studies, or fit into inappropriate schedules, or engage in programs requiring a number of hours a day or week impossible to meet without disrupting their lives entirely—with the alternative only of leaving the field entirely.

I would ask my fairy godmother to provide Erewhon with the interest, skill, and money to create experimental programs designed to fit these needs—programs that might turn out people with a rather different kind of training than the conventional ones, but training that would exploit the talents of such women and meet the needs they could serve.

Perhaps with such encouragement Erewhon's School of Social Work would be willing to consider whether it really needs to adhere to the requirement of practically every school of social work in the country that, after a few exploratory credits, students must attend full-time, five days a week; or whether, in fact, some of the women who are lost to this profession might not be important additions, if the institution were willing to enter upon such an experimental program, just for this population. The university would surely draw into this field women who have done able or even distinguished volunteer and community work and who now want professional training.

As a centralizing agent for such educational advising, planning, action, and research, I would urge Erewhon University to establish a research and counseling center that would keep records of what transpired in the educational process—how such women learned to study, after years of absence; how they functioned in different fields and different disciplines; what assets and liabilities they brought to their study—psychological and intellectual. Tons of paper have been used in reporting on the life and times, the frustrations, expectations, anxieties, competitiveness, dislocations of the American woman. Much of it has been gathered from discussions, legitimate and illegitimate "research" into the lives and opinions of women who are functioning unhappily or not functioning at all. We might learn something useful about the life of our time if we studied the progress of women who entered upon serious study and were not merely yearning for something they did not have. (Incidentally I would supplement such research with research into the lives of women who did not want to study, or train for professions, or jobs, but were having fruitful and satisfying lives inside their homes.)

This research and planning center would serve men and women who were planning courses or programs for this population, trying to discover whether in some cases quite different course requirements, distribution requirements, credits, independent study projects, might be suitable for them—and out of such observations might indeed come educational programs for a kind of student not at all envisioned when our present educational designs were created.

Above all, this research and planning center would be the counseling center for the women themselves—a place to which they could come to discuss their interest in study and work, where their talents, experience, expectations, and present life-design might lead them to go, if some knowledgeable person could point the way. What plans for study might be attainable for a particular individual and what ones not. Where they might find the opportunities for studying what they wanted to study. Whether, indeed, they should resume study at all. I have always felt one of our most important functions in our small counseling center was to encourage some women not to resume study.

If Erewhon University would undertake these functions, it would provide its students and the educational system itself, with information of great value to others as well. As its knowledge of what is appropriate for this population of women grew, it would reach also down into the education and life of girls of seventeen to twenty-one who will be the wives and mothers and returning students of another decade. They might tell us something about how to educate them that we don't yet know. It might even go so far as to give these young students who, we all know, are too often without a sense of purpose of what all this studying is for anyhow, a glimmering view that education does not have to end at twenty-one and a wedding ring and that the dim and distant time of life when one is thirty-five is indeed not too late to plan for a creative personal life.

If Erewhon University were prepared to create such a counseling, educational planning, and research center or institute, it might find out some valuable things about our confused and searching, and perhaps not altogether hopeless, contemporary life.

Jean W. Campbell:

Mrs. Raushenbush has indeed challenged us. I suddenly feel a desire to respond, and I assume that these three distinguished gentlemen share these feelings and are ready to comment. We shall proceed to their discussion.

Three academic areas of particular importance to women are those of education, social work, and the health sciences.

These fields, plus library science, include the interests of two-thirds of the women who have so far come to the Center. These are also the fields where great employment needs exist and to which the Center has agreed to give the major share of its attention in the first year or two of its activity. The Center has been enormously fortunate in being supported in its initial stages by an executive committee whose members are particularly associated with these fields and singularly influential in them. Our three discussants this morning are members of this executive committee: Dr. William Hubbard, Dean of the School of Medicine, Mr. Fedele Fauri, Dean of the School of Social Work, and Mr. Charles Lehmann, Associate Dean of the School of Education. We are not without representation of library science although they are not on this part of the program. Mr. Frederick Wagman, Director of the University Libraries, and Mr. Wallace Bonk, Chairman of the Department of Library Science, are both in the audience and will be meeting with you this afternoon.

To begin our series of three responses to Mrs. Rausenbush, it is my great pleasure to introduce Dr. William Hubbard.

William N. Hubbard, Dean of the School of Medicine:

The clinical sciences have the claim to the earliest dedication to the inclusion of women in the professions. It was in nursing that the first formal professional program for women was established. This trend has continued apace until now one of the least recognized but most important resources in meeting the health needs of the nation is that provided by women. In 1925 there was only one full-time professional health worker for each physician. There are now five and the increment is accounted for almost entirely by the entrance of an increasing number of women into an ever widening variety of related health professions. This opportunity will increase at a rate that will rise exponentially as we move into the present era which recognizes that health service should be available whether it can be of use. It is inconceivable that the patterns of distribution that would have sufficed when a lesser availability was acceptable to our society, will suffice as we move into this more humane concept of availability.

The newer methods of distribution are going to depend upon the increasing entrance of women into the related health professions. It will not succeed without their entry. And so I come to you, not to describe some long standing opportunity or some adjustment of existing patterns, but to call your attention to a revolution whose success will depend on the support it receives from the women of this country.

Let us now refer to the role of the physician, per se. Those of us who are immediately concerned with medical education are surprised and dismayed when time after time we have to reiterate what to us seems obvious and unnecessary of repetition. The role of women in medicine is so well established that it seems hard to have to convince anyone that it exists. The question of whether a woman can have a successful career in medicine and also a successful career as a woman in the home can be flatly answered in the positive. Looking at the contribution of a woman like Dr. Elizabeth Crosby, the asking of the question itself comes as a shock. When I think back to the teachers and colleagues I have had as women in the profession of medicine, I find it difficult to understand the nature of the question.

As far as availability of medical education for women is concerned, for over 25 years the ratio of applicants and the ratio of acceptances in medical school for women has been precisely that of men. That is, the ratio of women in medical school coincides precisely to the percentage of applicants to medical school who are women.

Now it may be that we should have recognized the general superiority of the applicant group of women and increased that percentage but given that as a possible hiatus the opportunity is there. Medical schools are like people—they vary from each other although they have some common characteristics. Medical schools vary all the way from one which has never admitted anyone but women to two who have never admitted any women. But in between and on the whole, the statistical average which I presented to you is correct.

More and more within the physician role in medicine, there is an increasing opportunity for women to work productively and the reason lies in the changing nature of the pattern that the physician follows. When 90% of all the physicians in the United States were committed to general practice, and this was the situation around 1925, it was difficult indeed for a woman to organize her professional life in a way that made a home life also available. The forms of medical practice have changed radically in the last 40 years and with the growing institutionalization of medical practice, the increasing amount of time that the physician spends in the ordered environment of the hospital—the predictable environment of the hospital—as this predictability and order has become an increasing component of the physician's role it has been possible for the woman to utilize this orderliness as a basis for planning the rest of her personal life.

As specialization has replaced the generality of physicians' responsibility, as Mrs. Raushenbush has indicated, there is a growing number of specialties that are particularly adaptable to the needs of women. I remember one of the young ladies a few years ago who came back to medical school after having seen her children grow to high school age, and planned a career in anesthesiology. She is now a practicing anesthesiologist in Greenwich, Connecticut. This is the kind of thing that is possible within medicine's current organization. Her role is predictable; night calls are rare in anesthesiology, and she can then move forward into a very productive era.

Now it is also important for me to say that the period of time in which one obtains his initial professional training is so long that if one divides this even further by part-time training it becomes extraordinarily difficult. I don't know whether we should get into details of counseling, but if you meet anyone who asks the question, tell her to finish her first year of internship before she breaks her professional training. Beyond that level, part-time arrangements are quite feasible. Prior to that level, they are almost impossibly difficult.

I would emphasize then that the great need in health fields is within the changing patterns of medical care. Consider a field such as clinical psychology; of enormous importance, of extravagant demand that can be controlled as to time and is populated increasingly as students move into the hospitals, by women.

The role of secretary is one that may not appear to be professional and yet as departments and sections in hospitals increase in magnitude, the executive function that secretaries serve is of enormous importance. This again is a field of crucial shortage. Indeed, there is not a one of the related health professions that does not have this kind of shortage.

How should opportunities be approached? It depends, I think, on whether the woman looks forward to entering the economic market for her skills, in which case she will be confronted with institutional demands at a peak level; or whether she wishes to have the personal satisfaction—quite apart from the economics—of participating meaningfully in professional effort at a volunteer level, this being the opposite extreme. At this latter level she will find a degree of flexibility that is much greater than if she competes in the open economic market. For this latter, there is on-the-job training that is widely available. For the former, I fear that one will find that the institutional economics will still demand the formal full-time commitment.

There is, however, within this broad spectrum an abundant opportunity for part-time effort in each one of these related professions. The training program that leads to them comes after the baccaulareate degree in some instances, or has a clinical phase which follows the classroom work of the baccalaureate program. In this clinical phase it is very difficult to rearrange schedules very much. And the reason is that, characteristically, the clinical phase is built around the phenomenon of patient need and this is very difficult to manipulate. Either one is there at the time the actual need exists and has his educational experience in terms of increasing responsibility for meeting that health need, or he simply is not involved. We have not yet been skillful enough to find any substitute for the reality of the educational setting built around actual patient needs and this continues to be a sharply limiting factor.

Let me reinterate very briefly then, the opportunities in medicine itself for the physicians are great. The contribution of women has already been tremendous and hopefully will remain so. We are pleased to note that a small increase in the number of women applicants to medical school is already taking place and that the traditional history of admissions being proportionate to applications predicts more women in the medical schools.

Parenthetically, it has always been a curiosity to me as to why women don't enter dentistry. This is the kind of clinical responsibility that with its nicety and precision and lack of need for great muscle, would seem to me to be attractive. It is the kind of clinical responsibility that can be scheduled, that it predictable for the most part. In most other countries, in middle Europe and in Scandanavia, dentistry is almost the property of women and yet in the United States for some obscure cultural reason that I have no insight into, women simply do not enter this field where there is an enormous unmet demand for practicioners. I would remind you of the introductory comment that I made that the distribution of health care in the United States is undergoing a revolution; that the nature of the revolution is an extraordinary increase in the number of people in the related health professions; that it is only by this increase that the health needs of the national are going to be met; and that the only source for increased manpower in these related health professions is the women of the United States. In a very real sense the realization of our expectations for improved health care rests upon a massive entrance of women into the related health professions.

We welcome you, as the saying goes, with open arms.

Federle F. Fauri, Dean of the School of Social Work:

Mrs. Raushenbush has made several references to social work, both as to social work practice and social work education. I agree with her that because the schools of social work in the United States have not modified their accustomed educational routines, the social work profession has lost many intelligent potential social workers. This is unfortunate because there is a shortage—an acute shortage—of professional social workers in Michigan and in the nation.

A study entitled "Salaries and Working Conditions of Social Welfare Manpower," which was made a few years ago by the U.S. Department of Labor and the Department of Health, Education and Welfare, shows that out of 105,000 practicing social workers in the country, only 22,000 or 21% of the incumbents had completed two years of graduate professional study. This suggests a shortage of 83,000 professional social workers in the United States, but in addition there were 15,000 unbudgeted positions, making the total of 98,000 social work positions that were either vacant or filled by non-professional social workers. Most of these 98,000 positions would be filled by individuals who had completed the two-year graduate professional program if they were available. But even if we assume that only one-third of these positions, or 32,000, should be filled by professional social workers with the balance to be filled by sub-professional staff, there still would be opportunities for women in professional social work in excess of supply for the next fifteen or twenty years. Moreover, society is continually creating new positions that are being filled by subprofessional workers or remaining vacant.

The story is similar here in the State of Michigan. The larger employing agencies, both governmental and private, are constantly recruiting professional social workers, and always have positions available for graduates of the two-year graduate professional program. The three departments of Michigan government which employ the largest number of social workers, namely, the Social Welfare Department, the Mental Health Department, and Corrections, always have positions open for social workers. The same is true of our juvenile courts in the larger counties and in the family service and child caring and placement agencies throughout the state. Now, if we applied the same pattern of taking one-third of the total jobs that I mentioned on the national basis to Michigan, we would end up with about 1300 vacancies as of today that could be and would be filled by professional social workers if they were available.

At our own School of Social Work here on the campus, we have permitted our enrollment to expand steadily in an effort to help meet the rising demand for social workers. We have been stodgy I think at times, but I might say to Mrs. Raushenbush, perhaps not quite as much as some of our brethern in the East. Currently, our school, The University of Michigan school, is the second largest in the country out of the fifty-nine accredited schools, and we have an enrollment of approximately 400 students. We plan on continuing a controlled growth pattern and our policy has been and will continue to be, to admit qualified mature women. As of last fall, we had fifty-seven women over thirty years of age enrolled in the school, or 14% of the student body. And of this number, eight were in the 31-35 age group, seventeen in the 36-40 age group, eleven in the 41-45 age group, and I was surprised when I looked at the figures, twenty-one over 45 years of age. Of these fifty-seven students, twenty-two were enrolled on a full-time basis and thirty-five on a part-time basis. What we have done to date in social work education is too limited to make this training feasible for intelligent women whose professional education must come when they are over thirty-five. We are planning, however, and we have made some changes just recently working in cooperation with the Center for Continuing Education of Women here on campus. We have designated one of our faculty members, Professor Patricia Rabinovitz, to work with the Center. She will be available to counsel and to plan programs of study with mature women applying to the school. In that consultation and planning, we are trying to make it possible to extend the two-year period to three or four years with three days a week, or four days a week in residence, making adjustments to try to fit the personal need of the particular older applicants.

The other thing we have done as a part of overall University planning, is to have the School of Social Work operate on a year-round basis, a change which will help women to utilize the summer months for study. We have been able to compress the two-year master's program into a 14-month period. For example, individuals who enroll in January, 1966, and continue their studies through the summer, would meet all the requirements and take all the courses required for the master of social work degree by April of 1967, or roughly fourteen months.

Those are a few things we are doing, and as I mentioned earlier, we are planning to work with the Center to try to expand our activities because the figures show, as everybody knows, that we need the mature woman in social work.

Charles F. Lehmann, Associate Dean of the School of Education:

I am cognizant that my colleagues have spoken with some sobriety to the problem that confronts us. I take it that you understand by this time, because I feel like dessert, that there is no question that we need mature women in education. I hope you will understand that you will hear in detail about programs in the School of Education if you attend our session later this afternoon.

Let me speak very briefly about some of the things that occur in the School of Education now which you may or may not be aware of. I want to speak more specifically, however, to three issues which were suggested by Mrs. Raushenbush's speech this morning. You must be aware, surely, that the School of Education has a long history and rather a comfortable feeling about mature women because we have been so much occupied with them. Also, you must know that women in general, not only the mature ones, are the biggest part of our program. Do you know, for instance, that at the last graduation 30% of all students here who got a baccalaureate degree also received a teaching certificate? That probably the ratio of women to men in that group is somewhere on the order, if it follows other years, of two to one? And that probably, again if it follows other years, that some 8% to 10% of those who passed through that commencement ceremony were, what has been defined here as, mature women?

The recent issue in education which I would call to your attention is the consequence of important federal support in various programs and, again this afternoon you will hear how you can be paid to go to school if you are interested in certain areas such as special education, or guidance and counseling, or other particular features of teacher training.

The three things that I wish to remark on have to do first of all with the characteristics of the animal, if I may use that expression, second, how the mature woman relates to other students; and third, what kind of response is suggested for an educational institution such as The University of Michigan. There is no doubt that the way in which we respond to the idiosyncratic needs of one particular segment of our population does color what we do for all the rest of the population. But in defining the animal, if I understood Mrs. Raushenbush correctly, there are two or three dimensions that puzzle me. First of all, is age. Some of my colleagues talk about older women. I am impressed, I must say, perhaps because I see them, at how sophisticated some nineteen and twenty-year-olds are, so that age really is not a very satisfactory dimension for me in defining the mature woman.

Second, she referred to these women as frightened, worried that they had addled brains, lost in an educational mechanism that they don't understand. She said that they are intelligent, however, that they maintain good academic records, and that they are persistent. These are some of the things I remember. I must say when I hear all of these dimensions and then confront 240 mature women, I am a little intimidated. I think the definition is one that troubles us and that we may want to revise because I would like to dip lower in terms of age. I would like to redefine the nature of the mature woman as she confronts the educational mechanism. I think right away of a definition my father (he is a musician) made years ago and he didn't understand college algebra. We may be in the same difficulty. He described it this way. If there are twenty square yards in a bramble bush, how much does it cost to shingle a haystack? I am quite sure that some of you who are frightened and who are lost have not certainly come through our mechanism. We may see only the determined woman. Sometimes I think we do!

Now, how should you relate to other students? Last night, I had the chance to quiz Mrs. Raushenbush briefly about her feeling that mature women ought to be collected in special classes, that we ought to make some leap over inappropriate educational arrangements for this coterie of mature women. I don't know the answer. I am sure that there is a great virtue and a great esprit that can be infused if you collect these women. This is true certainly in any special program. We find it in our Center for the Study of Higher Education or in some new programs for special education. But I wonder whether or not some of these gregarious features, or some of the features of maturity, should not be allowed to leven the regular programs. I confess as I continue to lose more hair, women twenty-one are probably less attractive than women thirty or forty, and I would like to see a class that is not such a thin slice of the culture; one that does have some sophistication in other areas of activity than the ones we see typically. At least in some cases, therefore, these mature women ought to share their wealth by taking other courses.

Third, Mrs. Raushenbush suggested a number of special functions which a large university might provide for mature women. I would like to think that the Center for Continuing Education of Women here at the University marks a new door, if you will, into this institution, one that needed opening and one that makes all of us look to our traditional programs and hopefully one that we may use as a lever for some kind of reform in our traditional programs. I think she is quite right when she calls for unique experimental designs, those which have an adjunct relationship to occupational possibilities. I think she is quite right also when she insists that the large university can provide an important research function into the nature of the woman's role in the University or in the culture. I do think that what she is looking for, if I can put it this way, is an innovated response on the part of this mechanism, not a traditional one. Again, let me call on my limited personal experience to tell you what I mean by innovated. I mean a response that you don't expect, one that makes you uncomfortable sometimes, the kind that is too often damped out in a fifth grade classroom.

I mind this in terms of my own children. I overhead a conversation between a ten-year-old son and a four-year-old daughter in which the ten-year-old son was trying to explain an abstraction to his four-year-old sister. The abstraction was a rectangle and he was exorting her and not getting anywhere and he said, "Look, it's a square that has two long sides." She didn't get this, so he went over to a card table and said, "Look at this card table. What would you have if I cut this in half?" She said, "A wrecked table!"

I think this is exactly the kind of response that we are being challenged to provide. I hope we are up to it, Mrs. Raushenbush. I would vote in favor of your corruptible Ph.D.

THE LUNCHEON SESSION

William Haber, Dean, College of Literature, Science and the Arts:

It is exciting for me as Dean of the College of Literature, Science and the Arts, as it is for President Hatcher and Vice-President Heyns and all of our colleagues, to see this conference, to see this turnout, to see this interest, because the project on which you are embarking is of developing significance in the economy, in the life, in the culture of the country. Women have opportunities beyond the role of being a homemaker. It is these opportunities which I suspect are implied in the Center and the program for continuing education of women.

I recall that many years ago, a woman education leader went to a man of means who had been contributing to the education of women and asked for the renewal of the very substantial annual grant. This time, he replied, "I am not going to give it to you anymore. I have done some thinking about education for women and I have come to a conclusion. If they are beautiful, they don't need it, and if they are not beautiful, it isn't adequate." That's a concept of education indicating a very narrow role for women, unrelated to their place in a highly dynamic, exciting, dramatic, growing society in which every kind of skill of either sex is crucial to the health and to the life of the country. For we live in a time when the changes in skills are going on at such a rapid rate that no one can ever say he has finished his education. It's never finished.

Recently, I told a group of students of coming across an item in the report of the National Science Foundation which said something like this: The Ph.D. in mathematics has six years' intellectual capital, a Ph.D. in physics has seven years' intellectual capital, a Ph.D. in engineering has nine years' intellectual capital. The explosion of knowledge proceeds at such a fantastic rate that if you do not continue to pick up new knowledge, the obsolescence of knowledge increases at an even greater rate. Therefore, if the education of anyone has been completed, life has ceased. Commencement is exactly what it is—the beginning, and not the end.

Today we are going to hear a distinguished speaker who will tell us something about the problem of the national economy and the problem of the government in relation to the economy. Our government, the United States government, is without question the largest employer in the country. Mr. Mello may correct that if I am wrong, but I believe there is hardly an activity in human affairs in which it is not involved. Since it is not a manufacturing institution but a service agency, it requires men and women of more than average education. Its personnel is concerned with research, public health, social security, labor relations, and administration in all its facets. There is scarcely an area in human affairs, whether in technology, in the arts, the sciences, social welfare, economic matters, even family relations, in which the federal government is not involved. Consequently, it often looks to colleges and universities in this country to recruit its personnel—its research workers, its social workers, teachers, nurses, doctors, and administrators.

Our speaker this noon is Robert F. Mello. It is his job to help in this process. The federal government, he tells me, hires about 250,000 people a year—not all from colleges and universities, but a great bulk of them. It is his task to review the process and the procedures and to formulate policy and techniques. He is Director of College Relations and Recruitment for the U.S. Civil Service Commission. He has had broad experience in the field of personnel administration—a good deal of it in the U.S. Army as Director of Civilian Personnel in the Army Ordnance Missile Command for over twenty years before assuming his present position.

In his current assignment, he directs a national program which includes both policy making and college relations involving all the agencies and activities of the federal government. Because the government as a service agency uses so many women in so many areas of human affairs, he can tell us perhaps more than any other individual about the relationship of education to the expanding opportunities for women. It is my pleasure to present Mr. Robert Mello.

EDUCATION, THE KEY TO OPPORTUNITY

by Robert F. Mello

Today we are living in a period of revolutionary change. Our rampaging technology is opening doors of knowledge and tearing down the curtain of ignorance that conceals the future; a future which too often leaves us with a feeling of doubt and insecurity. Yes, there is still ignorance, doubts, and insecurity. However, today we are not so much concerned with what the future will be, but rather how capable we are to take advantage of this new knowledge.

In this period of an expanding economy, and what appears to be boundless opportunity, we are faced with a paradox. We have a surplus labor market and a shortage of skills. A technological revolution—or evolution, if you prefer—such as ours often creates as many problems as it solves. The momentum of technology leaves those behind who do not possess the skills to keep up with it.

There is another potential problem that we must soon face, and this is;—how can we maintain this forward motion if we do not develop the skills necessary to feed the insatiable appetite of this technological rocket? It is a well known law of motion that it is impossible to push an object that is going faster than you are. It is just as well known that unless its thrust—or push—is maintained it will come to a screeching halt.

I would like to discuss with you today some facts of technological life, if there is such a life, and pursue some possible solutions to this dilemma. I would like to demonstrate that education—and particularly continuing education—is one key to this problem, and one that will open doors to opportunity far beyond our wildest dreams. Women must play a large, if not the largest, part in the solution to this problem of a serious shortage of vital skills.

Perhaps it would be of some benefit to review the problem of a labor surplus on one hand and a directly related skills need on the other. Since I am more familiar with the Federal work force and requirements, I will use this to illustrate the problem. However, I am sure that the same examples and problems can be identified in private enterprise and in the world of academia.

Our Government today is engaged in work whose scope and importance almost defies description. Whereas 50 years ago there were only about 400,000 Federal employees, there are now about two and a half million people working for the Federal Government all around the world. And it is not in size alone that a great change has taken place; the nature of the work is vastly different.

The Federal work force is now predominantly a group of skilled specialists and trained professionals in an ever-widening variety of occupations. For example, the Government today has more employees in the field of engineering than in straight typing positions, and more employees in the physical sciences than in agency mail and file operations.

The Federal work force has remained fairly stable in recent years, that is as far as numbers are concerned. Roughly half of all Federal workers are in white collar jobs, about one-fourth in blue collar occupations, and one-fourth in the postal category.

Beneath this relatively stable surface, however, run strong currents of evolutionary change in this composition. It is changing rapidly.

We anticipate that in the next four to five years, the white collar group will increase by about 10%, the blue collar occupations will decrease by almost 12%, and the postal category will increase by no more than 3.8%.

The major reasons for this changing makeup of the work force are technological advances, new occupations in many fields, and changing programs and job requirements throughout the Federal service. Activities requiring lesser skills are being reduced and those individuals who cannot adapt to change, or whose skills cannot be updated are left behind.

Within the white collar group the most dynamic change is taking place, one that should be of the greatest interest to this audience.

This group is composed of three rather broad categories; the higher-graded occupations encompassing professional and administrative-technical positions; the lower-graded occupations covering aid-assistants, general clerical, and some specialized occupations such as personnel and accounting clerks; and other occupations such as firemen, guards, police, and other clerical categories. Since I will be a little more specific about these categories later on, let me use a few statistics to illustrate what is taking place in these broad higher and lower graded occupations.

Over a 5-year period, which started June 30, 1964, we project that the total Federal work force will increase only 2.7%. This compares with a projected increase of 20.5% in state and local governments.

You will recall the increase in white collar groups I cited as being about 10%; more specifically it is 9.7%. The higher graded jobs we anticipate will increase by 17.4%, while the lower graded by only 2.7%.

Why is this? Technological change is a broad answer. The increase in the professional and more difficult administrative and technical jobs is responsive to the complex changes taking place. The lower graded jobs are influenced by automation; more and more routine tasks are being accomplished by automatic equipment. The drop of 12% in the blue collar category is in direct ratio to the level of skill that category now provides, to the anticipated skill needs during the next 5-years.

SKILL is the one word that stands out. Skill related to progress.

A brief look at automation, a true example of technological change, should be taken at this point. Automation is blamed for the part it plays in today's unemployment. I believe that history supports the fact that technological change actually creates more new jobs than it destroys.

The point that is overlooked, however, is that automation is an economic necessity, and to a great extent our national survival depends on it. The benefits derived will far outweigh the hazards and transitory problems.

This can be illustrated by some examples and projections given recently by the John Diebold Company, specialists in the field of automation.

By the end of the century, currency may possibly be used only for incidentals. Instead of taking home a paycheck, you will have a central account to which your employer credits your salary. All purchases at stores, markets, restaurants, will be automatically debited to your account at the instant of purchase.

New systems for handling of information will soon affect everyone. The library will become a central store of information that will be available at any point in the country by means of data communications systems. When you need information, you will simply dial a code number and information retrieval machines will project the material on a screen or produce electronically prepared copies.

Mr. Edmund B. Fitzgerald, President of Cutler-Hammer, Inc., in an outstanding speech last fall, cited these examples and then made the point that social consequences will be far more jarring than anything we have experienced in the past. He anticipated the following things would happen.

Within the next generation 60 million jobs will change in character.

Six-year-olds now starting school can expect their vocations to change three times during their lifetime. One shot of formal education may have sufficed for most of us, but our children will need some form of education all during life.

Fewer and fewer people will work in factories. More will be in offices and laboratories. Work will be more interesting because machines will do the repetitive tasks, while more of our working time will be devoted to innovation.

A premium will be placed on intelligence. Mistakes will be more costly. Some people who have been accustomed to monotonous jobs will have difficulty adjusting to employment requiring thought and skill.

As Mr. Fitzgerald so effectively pointed out, automation has created a whole new environment for mankind—a whole new way of life. It has given us much more than the steam engine, the cotton gin, the railway, or the modern computer. It has given society a whole new tempo, a whole new outlook.

Is automation bad? No, it isn't from the standpoint of progress. It is necessary as a tool of progress and without it we would not survive in the world of tomorrow. Admittedly it creates some problems that effect our people, but these can be overcome if we keep our eyes on the future and plan ahead. Continuing education is evidence of the type of planning required.

I think the stage is now set and we are ready to introduce the cast—Women. First I would like to introduce the women now in the Federal work force, and a little later the opportunities for women in Federal careers.

Roughly, about one-fourth of Federal employees are women—in round figures 600,000. They represent a wide range of occupations. In the white collar category there are 450 kinds of jobs in which at least one women is employed. There are more women than men in the broad groups of "library and archives," "mathematics and statistics," and "personnel administration and industrial relations." About 10% are in professional occupations, those requiring a prescribed course of study resulting in a degree.

As to monetary rewards, our statistics show that the average salary for these women is $5672 per year, compared to that of the men of $9271. This is due to the large numbers of women in clerical, typing and stenographic positions which pay lower salaries. This is nothing to brag about, only a statement of the facts.

In the professional categories women do as well as men. Twenty-five percent of the women are earning salaries in excess of $10,000 a year, and in engineering over 40% are in this bracket.

The best demonstration of the contribution being made by women is the annual Federal Woman's Award.

The Federal Woman's Award was established in 1960 to turn the spotlight of public attention on the achievements of Government career women. This Award is conferred each year on six women who have demonstrated outstanding ability and achievement in executive, professional, scientific, or technical positions. Candidates for the Award are nominated by the heads of the Government agencies in which they are employed, and the winners are selected by an independent panel of judges from outside Government. Criteria for nomination are very high, but there is never any shortage of nominees.

The 30 women who have received the Award so far include an astrophysicist, 2 attorneys, an aviation expert, a chemist, 5 research scientists, an economist-statistician, 5 executives, 4 Foreign Service Officers, a geologist, 2 pathologists in cancer research, a director of personnel, a physician-hospital administrator, a prison warden, a radiological physicist, 1 in archives management, a mathematician, 2 space scientists, and 2 economists.

The future for women in Federal careers is a bright one, and can best be illustrated by our crystal ball look into the future. Trends and projections light the way.

Our five-year projection in major professional occupations predicts an average increase of 17%. This includes professional work in 11 occupational fields, from Accounting to Veterinary

Science. In Mathematics a 58.4% increase is predicted, Education 30.4%, Physical Science 25.3%, and Engineering 21%. The other seven broad categories fall below the 17% average, with Veterinary Science showing a prediction of 3.9%. These occupations all require a professional degree.

The Administrative-Technical area covers positions of a technical or managerial character. These are "college calibre" positions, except for the purely technician occupations, and a college degree is desirable. Most of the administrative categories at the entrance level are covered by the Commission's Federal Service Entrance Examination.

There are 17 broad general categories in this group that show an average predicted increase of 20.9%, the largest being in the Comptroller-Management services showing a 43.4% projected increase. However, those occupational groups identified as homogeneous to Government show a 9% upward trend. Of the seven groups identified (Claims Examining, Business Industry, Investigation, Accounting, Transportation, Inspection, and Miscellaneous categories), all show a predicted increase of more than 9% with the exception of Transportation and Inspection, which show a predicted decrease.

One more category concludes the predictions for our purpose today. The Aid Assistant category, such as Medical Aid and Library Assistant, show an average increase of 4.9%. In Specialized Clerical categories an average decrease of 2.6% is predicted, with only Personnel and Supply Clerks showing an increase. General Clerical positions are predicted to increase by an average of 4.2%; there will always be paper work.

Well, that covers a lot of territory, but it should be of specific interest to you since it shows the opportunities the education key can open for women. You will notice that those occupations requiring educational accomplishment all show a predicted increase. And none of them have a sign that says, "For Men Only."

General conclusions that can be drawn from these predictions are many. I would like to highlight two covering Education and Placement.

In Education I believe three conclusions can be drawn:

1. Young people with appropriate capacity must be encouraged in every way possible to get the maximum education feasible prior to seeking full-time employment.

2. Adult education to expand or up grade existing skills and knowledge will require continuing emphasis. The Continuing Education Program, such as you have here at The University of Michigan, is an outstanding example of what is needed.
3. Counseling or career opportunities will have to stress the sharply increasing importance of high-skill occupations, and the steep and continuing decline of routine, low-skill employment.

From a placement point of view, employers must place more emphasis on (1) manpower planning and employee utilization, (2) equal employment opportunity for all capable talent, (3) utilization of older workers and the physically handicapped who can contribute, and last, but not least, —(4) employment of women. From the Federal Government's position as an employer, positive programs will be needed in every area to maintain and improve its capacity to meet Federal program needs.

President Johnson outlined the most urgent of these programs in his budget message two months ago. The included the all-out attack on poverty; all aspects of national defense; assistance to under-developed nations; the Peace Corps and its domestic counterpart, a National Service Corps; the peaceful exploration of outer space, and a manned lunar landing within this decade; and transportation; housing and community development of natural resources; aids to commerce and transportation; housing and community development; and urgent matters pertaining to health, labor, welfare, and education.

Opportunities for women?————Unlimited!

Perhaps we can be more specific about what you can do as individuals seeking these opportunities.

First, take advantage of these predictions on career trends and anticipate where your talents will be required. Predictions can also be of value to students just planning their academic programs. Whether you are in or out of school you can gain from this data. Let me illustrate.

- For those with professional degrees, or students inclined in this direction, the statistics I cited predict an increased need for mathematicians of 58.4%. Automation is the influencing agent.

- Education will require more and more teachers, and this vital occupational field is growing in stature, with increasing financial rewards.
- Degrees in Physical Science will be in demand, as will Engineering.

There are many others you can explore. For the non-professional degree holder, and students in this category, the projected opportunities are as exciting.

- The Comptroller-Management services show a project increase of 43.4%. Budgeting, economics, management analysis, data processing, and other skills will be required in increasing numbers.
- The social sciences will require more support, as will business, personnel, finance, and supply. Personnel is a wonderful field for women with non-professional degrees. As I mentioned earlier in my talk, in the Federal Government more women than men occupy positions in personnel administration.

Second, if you have a skill that is out-of-date because of a lapse since you acquired this skill, one answer is the Continuing Education Program. You can demonstrate your interest by entering such a program and, of course, completing it. Is this the easy way? No, I don't think so. It is about the only way, however, if the skill you seek to rejuvenate was gained through education. If it was easy I would doubt its effectiveness, especially in light of the demanding skill requirements of your Federal Government, as well as private enterprise.

Third, don't set your sights too high. This is practical advice, although perhaps not too popular. For instance; an out-of-date degree in engineering may never be as valuable as it was when conferred. However, current knowledge can make that skill useful in technical writing, as a research assistant to an engineer or scientist, or in management positions in technical programs. Another example that might be unpopular; Secretarial and Executive Assistant positions. If you have skill in this area, and a degree, you might find an opportunity that will lead to further opportunities. An assistant to an executive often is exposed to opportunities others do not see. Too, in this position you can make a contribution that is vitally needed, personally satisfying, and financially rewarding.

There are, of course other possibilities. The main thing is to find where and how you can contribute. If your contribution is significant, as I am sure it will be, monetary rewards and advancement to full potential are only a matter of time.

Fourth, make your career interests known to your center or university placement official. Seek interviews; sell yourself. You might even be asked to take a less rewarding job to start, one even slightly out of your skill line. If it is not too far from your objective, take it and prove your worth. The need for skill is too great to hold you back for long if you can contribute.

And fifth, think "Contribution." Your education key will open the door to opportunity, but "contribution" is the combination to the vault. What skill you contribute will be the ladder to success, and it will be worth the effort. The opportunity is no problem—exploiting it depends on personal contribution; and I'm talking about skill and effort, not money.

One more point before I conclude. Motivation of youth, particularly girls, must be undertaken more aggressively if we are to have the skills our technology and economy will need tomorrow. Young women must be motivated to pursue academic programs that lead them to a satisfying career experience. Satisfying in this respect means fulfilling their academic development through utilization of their acquired skills. Motivation in the home is so important; but motivation by women, in or out of the home, is vital! Presentations at PTA meetings, visits with students in classrooms, counseling counselors about career trends and opportunities, and other personal efforts are necessary if we are to have enough skilled women to take advantage of future opportunities.

Men need to be motivated, too, but the women need an extra boost if they are to assume the roles technology is identifying. You women in this audience must accept this responsibility as a fringe benefit contribution you can make, and be the motivators. You may not see the results, but you can bank on them!

In summary, women are now and can in the future make a significant contribution by preparing themselves for the opportunities where skills are so badly needed. There is time to prepare if you start now. The continuing education program is a giant step in the right direction. From a longer range view young women entering college, and even in high school, need to be motivated to seek these opportunities. You can help.

In the long run it is contribution that will be the answer to satisfaction and success, both for yourselves and your employers. You have the opportunity to acquire the key. All that is necessary is to find the door it fits.

THE AFTERNOON WORKSHOP SESSIONS

EDUCATION

Chairman: Charles F. Lehmann, Associate Dean, School of Education

Panel Members: Carol Willman, Director, Special Education, St. Louis Teachers College, St. Louis, Missouri. (Miss Willman studied at the University of Michigan during the spring term, 1965.)

M. Jane Schwertfeger, Assistant Professor of Education

Mary N. Taylor, Associate Professor of Social Work

Edward C. Roeber, Professor of Education

Malcolm A. Lowther, Associate Professor of Education

Lowell W. Beach, Professor of Education

SCHOOL OF EDUCATION - General Information*

The School of Education offers general programs for the preparation of secondary school teachers and for teachers in nursery school, kindergarten, and elementary grades. There are also special curricula for teachers of business subjects, industrial arts, vocational-industrial education, physical education and special education.

Undergraduate Unit

Enrollment in the Undergraduate Unit of the School of Education is appropriate for those who wish to quality for a Teacher's Certificate and for a baccalaureate degree (A.B. or B.S. in Education)—or for those who have a baccalaureate degree from the University of Michigan and wish to complete the requirements for the Teacher's Certificate.

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* This background information was given to all participants in preparation for the afternoon workshops.

Admission to the School of Education is sought through the Admissions Office of the University, located in the Student Activities Building. In general, admission to the School for degree purposes is restricted to those who have achieved junior standing. For those who already have a degree from the University, admission for certification purposes may be sought as a Special Student through the Office of Admissions.

For all students described above, a summary of previous college work, and a description of what remains to be accomplished will be completed by the School of Education and a copy furnished to the student. The School will also assign an adviser, and assist in the election of appropriate courses.

Graduate Unit

Admission to the Graduate Unit of the School of Education is sought through the Horace H. Rackham School of Graduate Studies. A student who is admitted then consults a graduate adviser in the field of his major educational interest for assistance in course elections.

Consult the bulletin, "Advanced Studies in Education," for specific requirements and procedures leading to the various master's degree sequences, or for regulations applicable to the Specialist in Education or doctoral degrees.

Special Master's Degree Programs for Teacher Certification

The applicant for an advanced degree in education must have a bachelor's degree or its equivalent and must normally present fifteen hours of undergraduate work in connection with any degree sought. This fifteen-hour prerequisite in education may be waived, in whole or in part, when the student's general academic qualifications are especially strong and his potential for teaching is high.

Students who have been admitted on the above basis may pursue a master's program which will enable them to qualify for either the elementary or secondary teacher's certificate. Such students are referred to the Recorder of the School of Education for an evaluation of their previous work to see if it provides for the necessary teaching major and minors. When additional work is needed to complete teaching majors and minors, students should select their cognate courses accordingly. Student teaching is required for certification, but not for the master's degree. Hence, student teaching must be taken in addition to the requirements for the master's degree. Before beginning his program, the student should furnish the Office of Student Personnel with the information required of all candidates for a teacher's certificate, and work out the details of his program with the proper adviser. Students wishing to qualify for an elementary teacher's certificate should consult Professor Findlay Penix, Room 1408 University Elementary School, and those desiring a secondary teacher's certificate should see Professor Malcolm Lowther, Room 2509 University Elementary School.

EDUCATION WORKSHOP - Abstract of Proceedings

Charles F. Lehmann: "Introduction"

Before we have any questions or general discussion, each member of the panel will present a three-minute outline of an individual area within the field of education.

Carol Willman: "Special Education"

Federal legislation in 1963 has provided 50 million dollars for training teachers of children who are physically handicapped, emotionally disturbed, mentally retarded, or have speech and hearing problems.* Traineeships for senior undergraduate students carry a stipend of $1600 plus tuition; graduate fellowships begin at $2000 plus a $400 allowance for each dependent plus tuition. There are also summer session traineeships. Detailed information about financial aids is available at the Special Education Office in the School of Education.

The undergraduate program in special education at the University of Michigan requires an additional semester or summer session beyond the usual four years' undergraduate work. Graduate training along with certification will provide virtually unlimited opportunities. In addition to the need for teachers, there is a demand for supervisory personnel and directors at both the state and local level, as well as competent instructors for the teacher training programs and research workers.

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*Grants are available under provisions of Public Law 88-164 through the Bureau for Handicapped Children in the Federal Department of Health, Education, and Welfare, and are awarded through state departments of education and universities.

Jane Schwertfeger: "Pre-School and Kindergarten Education"

For those who are interested in child development and early childhood education, the University has training both at the undergraduate and graduate levels in pre-school and kindergarten education. There are many opportunities for these teachers at present. There also is need for able students to do research in this area and continue on to degree work at the doctoral level. At present, a number of combined programs are being developed; for example, training teachers to work with pre-school children who are emotionally disturbed, mentally retarded, or culturally deprived.*

Mary N. Taylor: "The Visiting Teacher"

The visiting teacher is the social worker in the school, a person who helps the child who cannot adjust to the school situation. She works with the school staff, home, and community in addition to direct work with the child. Minimum requirements are teacher certification plus fifteen hours credit in education and social work.** Funds are available for full time study in the School of Social Work, and for released time for visiting teachers on duty who have already met the minimum requirements.***

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* This field has received national attention since the organization of Project Head Start as a division of the Office of Economic Opportunity, established by the Economic Opportunity Act of 1964. Under Project Head Start, Child Development Centers were set up all over the nation in the summer of 1965. To train the professional staff of these centers, training programs were held at 117 colleges and universities. Dr. Schwertfeger served as consultant and teacher in the "Staff Orientation and Training Program" held in Ann Arbor during the week of June 28 under the direction of The University of Michigan Extension Service.

** Temporary approval as a visiting teacher may be secured with only 15 hours additional credit; full approval requires 30 hours. For further detail, consult "Facts About the Administration of the Michigan Visiting Teacher Program," Circular No. 27 Rev. 10/63 Department of Public Instruction, Lansing, Michigan.

*** Stipends from National Institutes for Mental Health.

Edward C. Roeber: "Guidance and Counseling"

This area requires a master's degree and a secondary teaching certificate. Some school systems require that an applicant have teaching experience before being hired for a guidance and counseling position. The great need for this training is in the junior and senior high school. At the junior college level, there is notable expansion. At the present time, elementary school counselors are being hired in limited numbers, but the next five years should show a substantial increase in the number of counselors employed in elementary schools.

Opportunities for women counselors are increasing in the new youth opportunity centers* set up by the Department of Labor through the State Employment Service. These are civil service jobs for counselors of school dropouts and non-college youth. Counselor training can be secured by attending the NDEA Institutes** which provide stipends for qualified applicants.

Malcolm A. Lowther: "Secondary Education"

The University of Michigan recommends approximately 550 students a year for certification to teach in secondary schools. At the present, certification requirements include a major of about 30 hours concentration and two minor subject matter fields, with about 30 fields from which to choose. Teacher shortages at the secondary level exist in the sciences, foreign languages, mathematics, and selected other fields.

For students with a bachelor's degree, a fifth year program is available which leads to a teaching certificate and a master's degree in education. Funds are available to support study in a very few subject matter fields.

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*Ninety youth centers are planned for the United States. One has been set up in Detroit with 30 counselors on the staff; and another is scheduled for Grand Rapids.

**National Defense Education Act of 1958, as revised in 1964.

Lowell W. Beach: "Elementary Education"

Teacher certification requirements must be met in this field, as on other levels. Student teaching, with supervision, is part of the curriculum. You may be interested in knowing that about 1000 certificates are granted each year and about 400 are for elementary school teachers. A study in June, 1964 indicated that five percent of the graduating class were thirty years old, or older. A similar study made in August, at the end of summer school, showed that fourteen percent were in the thirty-or-above group. Two-thirds of the teachers are women.

Discussion:

> How can I bring my old certificate, which is now invalid, up to date?

Lehmann: At present, a teaching certificate is valid for a five year period. The law in effect now may be changed, but in any case, whenever you are interested in returning to teaching, you should deal directly with the State Board of Education. A permanent credential is obtained by teaching three years, and taking ten hours of additional work.

> These ten hours—are these in specific courses, or can you choose what you take?

Beach: No courses are specified, but six of the ten hours must be at the graduate level.

> For the six hours of graduate credit, is it necessary to be enrolled as a graduate student, or can one be a special student?

Beach: It makes no difference, but once you have been admitted to graduate school, it is easy to be re-admitted.

> What happens after I take ten hours work to obtain permanent certification, then don't teach for a while? Do I need ten hours more?

Beach: The "permanent" certificate is really a misnomer; it should be called a "continuing" certificate. In the near future, we expect five years training will be required to prepare for a teaching career.

> What in the new code* relates to keeping a teaching certificate valid if I teach only one year in the five year period?

Beach: In this case, the requirement is fifteen hours additional study. The revised certification code has not been released, so the effect of the proposed revision is still uncertain.

> Then this 15 hour proposal is indefinite?

Beach: Some sort of grandfather clause has been projected.

> What are the hopes for part-time teaching positions in the elementary and secondary schools?

Lowther: There is always a need for substitute teachers, but I assume you are not talking about this type of work. It depends on the supply and demand in each city. In some parts of the state, where there is a teacher shortage, it might be seriously considered. At present, Ann Arbor has a number of teachers on half-day schedules, but as far as I know the Board of Education prefers full-time teachers. Here, there doesn't seem to be a shortage of applicants.

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*According to a communication from Frank J. Kelley, State Attorney General: "There are some aspects of the Teachers' Certification Code which are not in accord with law. These differences are presently unresolved. It is expected that the code will be considered by the new State Board of Education [which took office January 1, 1965] in the near future."

The elementary school curriculum has little departmentalization, so there is consequently little opportunity for part-time personnel. Team teaching and "one teacher for one group" methods would discourage part-time teaching. Quite often, part-time teachers are hired for kindergartens and nursery schools. Visiting teacher positions might be a possibility in localities where one teacher normally covers more than one school. There might be half-time positions working with the mentally handicapped and emotionally disturbed. In some schools, teacher aides* are used to perform tasks like grading themes. This might be a part-time job. In the future, the pattern may very well change so there would be more part time opportunities.

> If you teach part-time for three years of the five year period, how does this affect obtaining permanent certification?

Beach: The present law provides for renewal of a certificate for a three year period. If you count up the days you have worked, and the number is the equivalent of twenty-seven months, you can forward the information to Lansing to secure a permanent certificate. Substitute teaching totals can be used, too.

> What are the educational requirements for substitute teaching?

Lowther: Two years of undergraduate work will usually permit you to be a substitute teacher.

Comments by the panel: The dilemma today is that subject matter is changing so rapidly that teachers constantly need additional study. For example, the difference in time between your original teacher training and the present indicates the amount of new information in your particular subject. Some fields are developing more rapidly than others. Now, if a group of people need to be brought up-to-date in a particular subject at the same time, some interim program might be developed. This is the type of educational need that should be brought to the attention of the Center.

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*During the past school year, the Ann Arbor system employed a few noncertified "teacher aides," chiefly to assist in a special education program for retarded children. In addition, ten women were appointed "Volunteer Helping Teachers" to serve as tutors during school hours. A "VHT" is described as "a person who holds a bachelor's degree and whose training and experience are appropriate for working with pupils." The year 1964-65 was a pilot period for the new program.

Is there any financial aid available for students in secondary education?

Lowther: There are no specific fellowships that I know of. A person who is eligible can secure a loan through the National Defense Education Act, and ten percent of the loan is discounted for each of the first five years of teaching. In this way, half the total really becomes a scholarship.

If I have a liberal arts degree, would it be better to work toward an elementary or a secondary teaching certificate?

Lowther: In general, it is easier to qualify for a secondary certificate in terms of course hour requirements, but it is easier to get a job in an elementary school. There are greater shortages at the elementary level. The decision here must be made on the basis of your own interests as to children and subject matter concentration.

Is there much of a need for Latin and German teachers in the public schools?

Lowther: In many cities, there are opportunities for teaching these languages at the secondary level. In the Detroit area, substitute teaching might be a possibility.

Can courses be scheduled so that a woman can come to the campus for a block of time, to attend classes and use the library?

Lehmann: Probably you prefer to be on campus for the 9 a.m. to 3 p.m. period. You should consult a course adviser to arrange your schedule.

> I think it would be helpful to have some adult education or extension courses scheduled during the day, rather than in the evening. Has this ever been considered?

Lehmann: This is a suggestion that should be made the basis for some future planning.

> When I take courses at the Rackham Center in Detroit, library facilities are a problem. Can anything be done about it?

Lehmann: There should be a mechanism so that this information gets to the proper people. The Extension Service library is a separate library division.

> Isn't tuition much higher, per credit, for part-time students?

Beach: The fees are set by the University administration.* Certainly the tendency has been to discourage part-time students. The directors of the Center should hear of these complaints, so they can assess the needs and make recommendations to the University administration.

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*Under the schedule of fees effective in the fall of 1965, each part-time student electing courses for credit on campus will be expected to pay (1) a minimum fee which contributes to his general campus expenses such as registration, Health Service, Union or League, use of the Library, etc. and (2) an established and standard fee for each credit hour elected. For example, undergraduate Michigan residents who elect less than ten hours will pay a minimum fee of $25 and an addition $15 for each hour elected. For non-residents, the base fee is $80 with a $45 charge for each hour elected. The scale is higher for graduate students.

Lehmann's Summary:*

Many of the questions directed to individual members of the panel are simple requests for information. "Where do I go to find out———?" Let me urge all of you either to come to me, or to Lowell Beach, and then be directed to the proper person if we cannot answer your questions. The important thing is to ask somebody, to initiate communication. So many people just stay home and wonder! We wish they would come and ask us whatever they want to know.

SOCIAL WORK

Chairman: Eleanor G. Cranefield, Professor of Social Work and Coordinator of Casework Instruction

Harvey J. Bertcher, Assistant Professor of Social Work

Jack Rothman, Assistant Professor of Social Work

SOCIAL WORK OBJECTIVES, SETTINGS & METHODS**

Modern society has established a wide variety of social welfare programs and services directed toward enhancing the social functioning of individuals. Some of these programs promote well-being through providing needed resources; others seek to restore to normal functioning disturbed or disadvantaged individuals; and others are directed toward prevention. These services are sometimes classified according to types of social problems and/or client groups. Thus, there are agencies which deal with mental health problems, medical problems, financial problems, marital discord, disturbed parent-child relationships, other services to children or the aged, and services to delinquents. These agencies may be public or private, sectarian or non-sectarian. They provide institutional services, or through legislative or other action, work to improve standards or to modify conditions which promote problems.

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*After the general discussion period, the education workshop divided into small groups, headed by the six members of the panel.

**This background information was given to all participants in preparation for the afternoon workshops.

Social workers have been assigned heavy responsibilities in these programs through the practice of casework, group work, community organization, research, or social welfare administration. Caseworkers and group workers provide service to people involved in stressful life situations for the purpose of helping them to achieve better social and emotional adjustments and to achieve desired changes in client behavior, attitudes and social relations. The service is offered within and through small groups and through interviews with individuals, with families, and with others on behalf of clients. Community organization workers help to improve services for people in trouble and facilitate planning and action to prevent social ills. They foster team work among groups, gather information on social conditions and work with citizens in social change efforts.

Social researchers engage in fact-finding and experimentation which provide a basis for the development of practice-method and social policy. Social welfare administrators in executive and staff assistant positions provide leadership in adapting and strengthening social welfare programs. All five methods of practice are used with all age groups and in all types of settings and all fields of practice. In some positions social workers participate as members of a professional team with a doctor, psychologist, nurse, religious adviser, teacher, or other appropriate specialist.

Opportunities for Women

A variety of employment opportunities exist for women of all ages with various capabilities, interests and levels of educational preparation. Staff shortages are acute for persons with education beyond the A.B. degree. Some agencies are able to utilize part-time employees.

The Master of Social Work degree is needed for full professional qualification to fill positions with beginning salaries above $6,000. Many teaching and research posts are available to those with education beyond the Master's level with salaries above $10,000. Substantial scholarship funds are available to assist students admitted to these programs in the School of Social Work. Special plans are worked out to enable women with family responsibilities to take some course and field instruction on a part-time basis.

Persons with an A.B. degree can qualify for work in public welfare departments, youth serving organizations, employment service, social security offices, and a lesser number of other social welfare organizations. Some social agencies are beginning to develop sub-professional positions for persons with two years or more of college education with a salary range from $4,000 to $6,000. In preparation for such positions The University of Michigan is offering a one-hour credit course in Detroit this summer through the University Extension Service in cooperation with the United Community Services of Metropolitan Detroit and the Center for Continuing Education of Women.

Secretarial, clerical and office management positions are also available in these social welfare programs.

SOCIAL WORK WORKSHOP - Abstract of Proceedings

Eleanor G. Cranfield: "Introduction"

There has been a good deal of talk about older women today, and indeed, Social Work needs the skills of mature women with good judgment. At The University of Michigan, our program is less inflexible than many of those mentioned this morning. I see that Regent Irene Murphy is here. She has had a long experience as a professional, and I will call on her later for a summary. Speaking from my own experience, let me say that when I entered this field thirty-five years ago, our goal was to "work ourselves out of a job," — to make everyone independent and able to function without help, and so eliminate the need for social work. Then the depression came along and "delayed" our goal. Since then, I've gradually come to realize that there will always be a need for people who have understanding and skill in human relationships in order to help other people having trouble.

Cranefield: "Casework"

In The University of Michigan School of Social Work, the program for a Master of Social Work degree normally takes two years of graduate study. It includes a variety of lines of knowledge, as well as field work under the direction of agency personnel. This is a heavy program, and certain difficulties are apparent to the person with home responsibilities, but we have made a three-fold adjustment:

(1) You can take up to 12 or 14 hours one course at a time.
(2) You can take as few as 8 hours work, and receive credit for being a full-time student in residence. These courses tend to be early in the day.
(3) Field work placements—the most exciting part for a student—can often be arranged at hours suitable for the student's overall schedule.

You haven't had too much demand yet for special arrangements. Many of the women returning now have time enough to pursue a fairly normal course. But we do have four women students currently who need to be home at certain hours, and it *is* possible, with planning, to work out programs to meet their needs. Also, there are positions in social work which don't require the regular professional degree.

Harvey J. Bertcher: "Group Work"

As a method in Social Work, group work is fairly new. Even though group work at The University of Michigan School of Social Work is only ten years old, it has grown rapidly. We now have the largest program in the country, with 70 majors, and will graduate about 25 students this year.

Group work is a method of dealing with individuals in small face-to-face groups in order to make changes in their attitudes and behavior. In the past, the method has been used most often in settlement houses, YMCA's youth organizations, camping, etc. Recently, it has been found to be effective in many other settings. We have outgrown the early image of the "fun and games" kids who move the furniture around to get more "interaction" in the group.

The method is based on the knowledge that small groups have a potent impact on the individual's way of looking at the world. All of us are members of many small groups which affect the way we think and act: the family, neighborhood play group, our co-workers and schoolmates. In social group work, we try to harness some of these forces and control such factors as: (1) who enters the group, (2) what direction the group takes, (3) what tasks it selects. We are concerned with the ability of people to get along in the world, what we call "social functioning." In group work, we recreate a situation which presents difficulties to people, and help them learn how to manage these situations better. We work in the same agencies and are interested in the same kind of clients as the caseworker, but we use small face-to-face groups instead of the one-to-one interview relationship as the way of helping.

Students with field work assignments are currently working in many different settings, for example:

(1) School referal groups. These can exist in elementary, junior, or senior high. They involve drop-outs, the classroom disrupters, the extremely withdrawn child—kids who are having difficulty adjusting to and benefiting from the school situation. The social group worker provides help to the school by forming groups of children with similar problems. The teachers suggest the students. We form groups of 5 or 6 kids—those having the greatest problems. We first see the parents. Then we meet as a group, and explain our procedures, pointing out that as a group they can have some fun and perhaps help each other with problems they have in common.

(2) Agency referal. An example might be mothers on welfare. Here we are usually working through a public assistance agency. These are women who are all in the same boat—unemployed, with small children, frequently no father in the home. So a group worker might ask, "How do you manage on an A.D.C.* budget?" Or, "How do you control Johnny without a father?" Many of the answers come from other members of the group.

(3) State hospitals. Some patients are extremely withdrawn, and not adept at relating to others. We can help them to prepare for leaving the hospital and functioning on their own. We discuss the difficulties experienced within the hospital, perhaps may organize recreational activities—to teach them how to plan and manage their own activities and carry out simple tasks.

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* A.D.C. refers to "Aid to Dependent Children" authorized in Section 56 of Act 280 Public Acts of 1939, as amended, for the State of Michigan. Act 280 was drawn up in conjunction with Title II of the Social Security Act of 1939, which provides federal funds for approved state aid projects. In the national legislation, the longer term, aid to families with dependent children appears.

(4) Street corner gangs. This is a frightening area, because all we see of it in the newspapers is the violence. What we don't see is the apathy, the unhappiness, the tedium and boredom lying behind the violence. We used to try to bring these kids into the established community centers, but this didn't work. They either wrecked the center, or took it over as part of their territory. So, the social worker, in this case called a "detached worker," now meets them in the street. He tries to help organize a group that won't get into trouble, and helps see that they get a fair shake if they do. Many of these lower-class youngsters have a very limited possibility of getting ahead, moving out of their environment. The social worker can provide some links to help them move out, to acquire socially acceptable behavior, and improve the picture of the group in the neighborhood. He may provide some individual counseling and help in getting jobs.

Looking at the group here in this room, I don't know how many of you women are apt to be interested in working with street gangs. But there are female gangs, by the way, sometimes harder to handle than the boys because you just don't expect to encounter this behavior in girls. We do have one girl who is working in a boys training school, and has worked out very well. She seems to have provided a kind of mother-figure for the boys.

Jack C. Rothman: "Community Organization and Administration"

Community organization is a "more unknown and obscure area" of social work. The usual image of social work is that of helping individuals, or groups, with problems. In this area, we deal with social problems, rather than the individual with personal difficulties. We are concerned with the operation and maintenance of programs, agencies, and services needed to correct or prevent broad problems.

The purpose of our program is community problem solving—trying to solve problems on a community-wide basis. We do this by:

(1) Changing certain social conditions which create problems. (For example, an individual's unemployment may be related to discriminatory practices in the community. We may promote legislation to prevent social causation of these practices.

(2) Coordinating and rationalizing services. The pattern of American social work has been that of volunterism, with a tendency to go off in many directions. We can set patterns for delivering social services, acting as a catalyst to pull resources together effectively.

(3) Seeking to involve people in planning the events affecting their lives, to express their own views on solving the problems of their community.

There are many kinds of agencies and many different tasks performed by workers in agencies. In health and welfare agencies, we try to coordinate the services available: to close gaps in service, eliminate duplication. With the new poverty programs, many agencies are getting involved. We seek to bring them together, to divide up the projects rationally.

In neighborhoods, work in settlement houses in low-income areas is a traditional activity. We work with people on general problems of neighborhood improvement—whether exterminating rats, developing playgrounds, or "fighting City Hall." In a renewal neighborhood, we get citizens together to understand how the program of urban renewal will affect the neighborhood and how to influence the program. Community organizations might also be concerned with such projects as recreational facilities, race relations, or school fund raising.

In the area of administration, the purpose is to organize and direct social work agencies and programs. We want to devise the best possible services, best kind of agency, best rendering of services. This field is as broad as the field of social work itself. It includes all kinds of agencies, executive heads of agencies, program and policy analysts, research and training specialists. Administration includes the supervisory role over other employees, professional and non-professional. This comprises the study of written reports, review of reports and statutes, communication with staff, relations with public, preparation of written material, budgets, cost analysis, purchasing, evaluation of programs, etc.

Irene E. Murphy, Regent of The University of Michigan:

In the early day, one person was responsible for all area—there were no specialists. I dealt with all three of these packages* before they had names. They had no program at Michigan then, so I was allowed to follow an "eclectic" program—I chose courses that I thought I'd need. I tried psychology in the Literary School, but soon dropped that. I doubted that any client would come in saying that she was having trouble with her medula oblongata. I took clinical testing in the School of Education, and went over to the Medical School for psychiatry. When the social work program was organized later, it followed just about the program I had chosen.

Social work used to be called by very direct names. There was the "AICP," Association for Improvement in the Conditions of the Poor, and the "SPCC," Society for the Prevention of Cruelty to Children. Group work used to be called "character building." As I became involved with medicine, psychiatry, law,—all the things you use in helping people—my brother, a conservative type, asked me, "What has all that got to do with taking a basket of food to the poor?"

After the war, in 1946, I was sent as captain of a team of four social workers to the Phillipine Islands by the UN. I gave inservice lectures to lay people who wanted to sample this new thing. I had only one textbook, ,which I found in an Army library. It was called Common Human Needs, by Charlotte Towle.** That was the whole story—universal needs, which exist everywhere—in every family, community, and country.

Discussion:

> We have heard no mention of gerentology. Yet, there is a great deal of community interest in senior citizens. How can I be of more service to these people?

Cranefield: This is a matter of concern for us, too, and presents a tremendous opportunity for mature women because some younger graduates resist this area. Here is a great need, requiring particular sensitivities. Field placements and some stipends are available for people interested in working with agencies.

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*i.e. case work, group work, and community organization.

**This 122 page volune, first published in 1945 and revised in 1952 and 1957, is still a classic in any social work bibliography. Charlotte Towle has been on the faculty of the School of Social Work Administration, University of Chicago.

Comment: I am a nurse, and have had experience teaching emotionally disturbed children. I became interested in the elderly, and now teach courses for them through the Ann Arbor School system. They come to me with problems, though what I am teaching has nothing to do with them personally. They must have no one to turn to.

Cranefield: Those of you with this special interest should talk with Miss Reebel,* who has worked in the field of gerentology. Perhaps she could help you.

Bertcher: Mr. Siegel is responsible for a project to train people to work in this area.** He has edited a publication, arising out of a conference last year, which might be useful.*** Interested persons should see him, also.

> I have been working on a program for A.D.C.**** mothers, through our YWCA. They look to me as a "momma"—about a hundred of them—, and I'm very much involved with their lives. I try to help these women do something for themselves, and I need more training, but I can't go through the whole two year program because I have little children.

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*Miss Katherine Reebel, professor of Social Work, and past president of the Michigan Gerentological Society. Among other activities, she regularly participates in the annual "Conference on Aging," held each summer at the University of Michigan.

**The training program, supported by the National Institute of Mental Health in Bethesda, Md., began in July 1962. Project #NIH-5T1 MH 7801.

***Sheldon Siegel (ed), Social Work Practice with the Aging and Its Implications for Mental Health (1964).

****A.D.C. (See footnote on page 56).

> I'd really like to know more about
> group work.

Bertcher: We don't require people to come to school only to get a degree. You can take only one course if you want. You may get "sucked in," and decide to take a whole program, but you could start and try a single course.

Murphy: You can be eclectic again.

Bertcher: Since you're interested in how to organize this program, not in doing it yourself, it sounds as though you may be close to the community organization approach. You ought to talk to our faculty, to get advice about the right course.

Cranefield: Yes, the door is open. You don't have to be a degree candidate; you can be a special student.

Murphy: I think that's one thing this new Center* can do—to heckle and fight the catalogue. It gets full of footnotes saying that you have to be such-and-such to do such-and-such. The Center can be the advocate of the person who wants something special and can fight battles for her.

> There is a legend around that you
> can't come and "take a course" at
> Michigan unless you are aiming at
> a master's degree. Should I not go
> to the Graduate School, but come
> directly to the School of Social Work?

Cranefield: Yes, we are a separate school, and we have special students who are not candidates for a degree.

> Is there a place for the woman who
> does not want a professional paid
> job, but wants part-time or almost
> full-time professional volunteer work?

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*Center for Continuing Education of Women, The University of Michigan, established September, 1964.

Cranefield: Medical agencies have used such people. Certain family and children's agencies have richly used them. Public agencies have not usually found as good ways to use volunteers. The private agencies have done more in this line.

Bertcher: The supervision of volunteers is one of the subjects which needs to be studied. Social work began with volunteers. Board members, fund raisers, case aides—there is a whole gamut of ways volunteers can help. If you don't know where to start, go to the community fund office.

> But doesn't this usually just mean technical help, typing, etc.? A volunteer wouldn't use real skills such as counseling?

Bertcher: My mother volunteered her services as a Teaching Aide in a New York public school. It was a very rewarding experience for her and a great aid to the teacher. But many schools are very wary of this sort of thing.

> Yes, but would they have welcomed her volunteer services, if she had been a teacher herself?

Bertcher: In social work we age beginning to use sub-professional people in neighborhood work, because they know the neighborhood and the people better. There is not so much social distance.

Rothman: Volunteers perform auxiliary services, to aid the technical services provided by the professional worker. The professional usually actually does the counseling.

Comment: But as a volunteer I can get closer to them because they know I don't have to do it. The A.D.C. mothers say, "She's not getting paid to help us." These women are "social worked" to death. That's why I've worked through the "Y," because the women feel there's no stigma attached to going there. I'm involved with a lot of lives, and I'd like to know more, but I don't want to lose my volunteer status.

Comment: I am a professional YWCA worker. Social work, as a profession, doesn't encourage workers to come into an agency like the "Y" and do "character building," so we are forced to use high-level volunteer help. We are desperate for such people. Master's degree people are treatment-oriented; they want to work in hospitals and institutions. We need help to train and use volunteers.

Cranefield: The Y is one of the rare agencies which do this.

> I am a layman. In three years my last child will be in school. But right now I feel that I'd have to spend the rest of my life in training, just preparing. Most of the cases I've had experience with need a highly trained worker, a professional to fall back on. If you have a two-year limit to prepare yourself (I have a Bachelor's in Music), how can you train yourself to be some service to some group? Could I take a course or two and be a useful volunteer?

Cranfield: You might take a course in case work and one in human growth and behavior. We do have a space problem. We don't have enough room for the full-time people. It is difficult now to get a room for another course. We're talking about having two shifts, each spending half of the week in the field and half the week in courses. Winter and summer semesters are better, but in the fall semester there is no extra room.

Comment: There should be room!

> Are there opportunities for part-time paid professional work? Is it worth the time and financial effort to complete a degree if you know you don't want to work full-time?

Cranefield: Yes, especially in Ann Arbor, and especially in casework.

Comment: I have a degree, and I don't have to look for offers; I get calls asking if I would take a part-time job.

> Does the School of Social Work have a program for teaching social work to others?

Rothman: Primarily this would be the doctoral program.

Cranefield: Some of our master's degree people are teaching in colleges; one is teaching sociology, for example, at the undergraduate level. I think there are others at Michigan State, Eastern Michigan and at Western Michigan University* teaching undergraduate courses. The opportunities for teaching are increasing for people with master's degrees in social work.

Comment: I would be interested in such a program—learning how to teach and what to teach about social work to undergraduates.

> I intend to finish a master's degree, and it seems that the timing is important—when to re-enter the University. Do you have any advice? Are there any courses at the University which might help, which I could take, in advance of re-entering the regular degree program?

Cranefield: Yes, there are, but you should come in to the School of Social Work for counseling.

> If you do return to get a graduate degree, do you have eventually to enroll full-time? The field work

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*Michigan State University, East Lansing; Eastern Michigan University, Ypsilanti; Western Michigan University, Kalamazoo.

> placement, for example, is not always in Ann Arbor.

Cranefield: We try out best to get married women with families into local agencies. Try to see what you can do. For example, one student has arranged her program not for the usual two days a week, but rather the hours she can manage on a consistent basis. There is a degree of flexibility.

> Is there flexibility for older workers with experience? Can you vary the program, or must you take prescribed courses?

Cranefield: That is the current arrangement. There is not too much flexibility there.

Bretcher: Taking accredited courses for a degree is one thing, but re-tooling, taking some courses without getting a new degree, is another. A minimum full-time load could be two 2-hour courses and three or four hours field instruction, with maybe a special reading course, to complete the eight hours full-time requirement for each semester. We have one student who is taking two courses and field instruction while running an agency full-time. Full-time requirements are not insurmountable.

Rothman: The field instruction is considered an integral part of the program inseparable from class work.

> I have had the work in agencies but there has been a long time lapse. Is there any leeway in this case?

Cranefield: Not officially. But have a conference with Mrs. Rabinovitz.*

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*Mrs. Patricia Rabinovitz, Professor of Social Work and specialist in social work administration, University of Michigan, is chairman of the Admissions Committee.

> I have a few credits to go to finish my first year of graduate work, which was interrupted by the advent of twins. I need $15 or $20 a week for babysitting. Do you give stipends to part-time students?

Cranefield: Very definitely, you should see Mrs. Rosemary Sarri, the faculty member who handles stipends.

> Do you accept transfer credits—in my case, 15 hours from Michigan State?

Cranefield: We don't accept the transfer until one semester of work is satisfactorily completed here. But we do accept credits from accredited schools.

> So many people say, "Wait until you can go full-time." I can manage two to four credits per term now, but no more. We are not through having children yet but at this slow rate, would I be stopped by the six year rule? Do I go to Social Work School, to graduate school, or what?

Cranefield: You go to the School of Social Work as a special student. It won't be held against you. We have been known to allow more than six years for completing a degree. But even if you waited, you'd be all right.

We are about out of time. Look at the publications on the table as you leave. Disregard the salaries in the publications that are five years old. Salaries have gone up since then. You still don't get rich, but you'll never be bored!

HEALTH SCIENCES

Chairman: Mabel E. Rugen, Professor of Health Education, School of Public Health

Panel Members: Miriam L. Keller, Assistant Dean of the School of Nursing

James W. Richards, Assistant Professor of Pharmacy Administration

Dorothy Hard, Professor of Dentistry and Director of Curriculum in Dental Hygiene

Roger B. Nelson, Associate Director of The University Hospital

TRAINING AND CAREER OPPORTUNITIES IN PUBLIC HEALTH*

The field of public health may be approached from a variety of academic backgrounds and professional experience. Previous training may be in such diverse areas as mathematics, the biological and physical sciences, sociology, psychology, medicine, nursing, dentistry, teaching, social work, engineering, business administration, medical technology and dietetics. Agencies which employ public health personnel include: official health departments, voluntary health agencies, some social agencies, industry and business, hospitals and schools. There are also opportunities in health research.

The basic professional degree for public health workers is the Master of Public Health. The School of Public Health offers fourteen different programs of study leading to this degree. One of these programs is designed for women with a background in foods and nutrition, and hospital dietetics. Doctoral degree programs are also offered. Students interested in instruction on a more flexible basis than that prescribed in the degree programs may be admitted as special students. Such students will be assigned an adviser who will help them arrange a course of study suited to their individual needs. Upon request, special students will be given a statement of attendance for academic work completed. Qualified students may elect courses for credit which may be applied toward a degree at some future time, provided they meet the regular admission requirements for the degree program.

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*This background information was given to all participants in preparation for the afternoon workshops.

The woman who wishes to pursue a course of study that will prepare her to work in a capacity in the field of public health not requiring the MPH degree may apply for admission to the School of Public Health as a special student, or she might enroll in the Graduate School and elect appropriate courses in the School of Public Health. Depending on previous academic or professional preparation, these women might qualify for such positions as: statistical clerks, laboratory workers, aids in epidemiological investigations, public health technicians, nursing in public health, and assistants in health education, administration, research, as well as programs of adult health and aging, maternal and child health and medical care. The specific duties and responsibilities for such positions will vary from agency to agency. It is probably advisable for a woman to contact administrators of community agencies to determine opportunities for employment, and necessary qualifications. She could then contact the Dean of the School of Public Health, who could suggest appropriate courses now available or those which may be arranged. It is possible that special programs of a short or long term could be developed at the non-professional level, if there were adequate demand for such preparation.

VOCATIONAL AND PROFESSIONAL NURSING

The School of Nursing offers two types of nursing programs: the basic baccalaureate and master's programs. Shorter programs for the preparation of nurses are the practical and associate degree programs, which are one to two years in length and are available at vocational schools and community colleges.

For those women seeking re-employment, who have been inactive in nursing, there are a variety of other opportunities. First, many hospitals and schools of nursing offer refresher courses to up-date the returning nurse's knowledge and skills. Some of these courses provide the opportunity for clinical practice under supervision. These are usually short-term courses of four to six weeks, with emphasis on those activities that will assist the nurse to be employable at once.

Secondly, for the women who wishes employment in hospital settings, but does not wish nursing duties, there are many non-nurse positions available, such as ward clerk, clinic clerk, or service supervisor. This latter position is in the developmental stage at The University of Michigan Medical Center, but holds much promise for the future. The service supervisor is responsible for all of the non-nursing activities in the ward. This range of activities includes maintaining adequate supplies and equipment, taking inventories, payroll activities, and generally coordinating the ward activities of the various non-professional personnel.

Many of the paranursing activities can be performed by the young woman, but maturity and life experience of the older woman can add a dimension to the activities that is beneficial to patients and the hospital.

POSSIBILITIES FOR WOMEN IN DENTISTRY AND DENTAL HYGIENE

The study of dentistry does not lend itself to part-time effort at The University of Michigan, particularly at this time when very limited teaching facilities in the Dental School restrict the number of full-time students that can be accepted each year. This is also true of dental hygiene. Great care is taken in the selection of dental and dental hygiene students to make sure that those finally chosen will be capable of using their assigned "dental office" in the clinic during all the hours of clinical practice, so that no equipment is wasted.

So far as the practice of dentistry is concerned, it is not economical on a part-time basis, unless one can work in association with a full-time practitioner who keeps the office running and is willing to have a part-time associate. Dental hygiene, on the other hand, can be practiced on a part-time basis, and indeed, many hygienists do so. The hygienist in private practice always works in the office of a dentist so she has no responsibility for the purchase or maintenance of equipment or payment of rent. This is her employer's responsibility. Many dentists prefer to employ a dental hygienist on a part-time rather than full-time basis.

CAREER OPPORTUNITIES FOR WOMEN IN PHARMACY

In general, the wide variety of career opportunities in pharmacy are open to both men and women. The last manpower census of the National Association of Boards of Pharmacy included over 7,000 female registered pharmacists, representing about 8% of the total. The 1964 enrollment tabulation by the American Association of Colleges of Pharmacy includes 1,674 women enrolled in the final three years of study at the various colleges of pharmacy in the United States. There has been a steady increase in the number of women entering the study of Pharmacy; the 1964 female enrollment represents 14% of the total enrollment.

Women interested in a full-time position can choose from a variety of positions in hospital pharmacy, community pharmacy, industry, teaching or government work. The majority of women pharmacists choose hospital pharmacy as their specialty. Pleasant surroundings, regular hours, good salaries and the opportunity to make full use of their professional training are but a few of the reasons many women choose this field of practice. A number of women are employed as staff pharmacists in neighborhood drug stores throughout the country. The community pharmacy has a special attraction for those who enjoy meeting the public in a retail store along with their professional duties.

Many women pharmacists are employed by pharmaceutical firms in research, quality control and product development activities. Positions with the Food & Drug Administration, the U.S. Public Health Service, and the Veteran's Administration are open to the female pharmacist interested in government employment. With advanced training, positions in teaching and research at the several colleges of pharmacy are also open to limited numbers of women pharmacists. A number of pharmacies, both community and hospital, are operated by one pharmacist often working without other professional staff. Because of this situation, many part-time positions are availalbe. The pharmacist seeking a part-time assistant is often willing to adjust the work schedule more to the availability of professional help than to his own desires.

All states require the completion of a five-year college curriculum as the minimum educational requirement for licensure as a pharmacist. In addition, most states require some time be spent as a pharmacy intern (six months to one year) prior to licensure. After fulfilling these conditions and passing an examination given by the State Board of Pharmacy, the individual is licensed as a registered pharmacist. At least three years of the five-year college training must be spent in residence at an accredited college of pharmacy. Because of this requirement and the nature of pharmacy studies, part-time work for a degree in pharmacy is not practical.

HEALTH SCIENCES - Abstract of Proceedings

Introduction

At the opening of this afternoon workshop each participant stated her educational and professional background and information on her employment objective. The largest group included nurses who had earned R.N. degrees by completing two or three years of training. Most of these now wish to qualify for a B.S. in nursing or for teaching in the nursing field. One wishes to prepare for psychiatric nursing. Several women were interested in training as practical nurses.

There were three M.D.'s, two of whom had not practiced for many years. One had not taken her internship. A dietitian was interested in qualifications for teaching at the college level. A few of these women had considerable training in chemistry and bacteriology. The areas of employment interest included medical secretary, medical technologist and [illegible].

[illegible] - Nursing Education

[illegible]

is less time-consuming than it used to be. Now, the students have regular vacations and exam periods.

Although The University of Michigan grants only collegiate degrees, other schools in the Ann Arbor vicinity offer a two-year "Associate" degree in nursing and a one-year course in practical nursing. One other source of training is the in-service education program given by most employing institutions. The University has attempted to give four to eight week "refresher courses" to recruit nurses back into active duty, but there has been little response. We are not planning any at present.

James W. Richards: Pharmacy

Right now there is a big demand for qualified pharmacists, either men or women, in hospitals, pharmaceutical industry, and in community pharmacy—the traditional "corner drug store." Most hospital and industrial positions are full-time, but in community pharmacies many jobs are open for part-time assistants to the pharmacy manager, who is often also the owner of the pharmacy. The demand here is so great than an applicant for part-time employment can often arrange her own hours.

The University of Michigan grants two professional degrees in pharmacy. The Bachelor of Science in Pharmacy requires five years of college preparation; the first two years may be obtained in any accredited college. However, the final three years must be spent in the College of Pharmacy. The University of Michigan also offers a six year program for well qualified students leading to the Doctor of Pharmacy degree.

Some higher level positions in industrial pharmacy and hospitals require work beyond the bachelors level, usually a M.S. or a Ph.D. Students aiming toward university teaching and research will continue on to the Ph.D.

If you wish to be a practicing pharmacist, you must have a degree from an accredited college of pharmacy and pass a state licensing examination, so you cannot make real use of a partially completed education. On the other hand, some hospitals employ "pharmacy aides" who work under a licensed pharmacist and have less training.

Dorothy Hard: Dental Hygiene and Dentistry

The University has two programs in dental hygiene. One is a two-year curriculum for girls directly out of high school who have superior records including one year of chemistry. The other is a four-year program including sixty (60) semester hours of liberal arts followed by two years in the dental hygience curriculum in which are included courses in the School of Public Health and the School of Education. Graduate of the latter program receive a Bachelor of Science degree in Dental Hygiene. Both groups of graduates are required to take State Board Examinations in order to qualify for practice as dental hygienists. They are licensed to practice under the supervision of the dentists. Their work consists of prophylaxis and patient education. Those with degrees often have positions as teachers in dental hygiene schools or in State or Federal public health agencies.

Because our lecture and laboratory space is so limited, we teach students only on a full time basis. The profession, however, offers excellent opportunities for part-time work and this demand will probably continue for a long time.

In contrast, dentistry is practical only as a full time profession. It takes time to build up a private practice and a heavy investment in expensive equipment. Aside from this explanation, I have no answer to the question, "What don't women become dentists?"

Mabel E. Rugen: Public Health

The School of Public Health draws together a variety of professional people: nurses, dentists, physicians, teachers, bacteriologists, dieticians, social scientists, mathematicians, engineers, and others. In the announcement, you will find descriptions of the fourteen different programs of study. These programs are designed to give further preparation in public (community) health to people, most of whom already have some other professional qualifications as stated above. Among the public health areas studied by all students are: public health administration, biostatistics, environmental health, and epidemiology. Additional areas include: maternal and child health, mental health, medical care, adult health and aging, industrial health, public health nursing, nutrition, dental public health, and health education.

Some special students* are accepted for training in particular fields. Qualified individuals with special interests, not necessarily in one of the regular degree programs, should contact the office of the Dean of the School of Public Health to obtain further information. Public health is a field in which there is a shortage of trained people in all areas and many position are open now. These employment opportunities are in governmental, voluntary health and social agencies, commercial companies, hospitals and educational institutions.

Roger B. Nelson: The University Hospital

The University Hospital is the employer of people in all fields that have already been described. In addition, the Hospital needs people with other kinds of special training. Radiation treatment equipment requires the services of physicists. Electrical engineers are consulted concerning the purchase, operation and maintenance of complicated electronic equipment. Teachers in the Hospital School usually must have courses in Special Education. Hospitals as well as junior colleges train practical nurses, and although many have an age limit of 35 or 45 for beginning training, some schools are dropping this restriction. Our hospital staff also includes medical and psychiatric social workers and two ministers who serve as hospital chaplains.

In any hospital there are many categories of jobs which do not require medical or other professional training. Women with management skills supervise the hospital housekeeping and arrange the work schedules of maids and porters. There is a big demand, too, for secretaries and clerical help. A medical secretary often has special training in courses such as those offered at Cleary College, Ferris State, or some of the community and junior colleges.*

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*University of Michigan students who are not registered for a degree program are placed in a special category called "NCFD," i.e. "not candidate for a degree." Depending on the school or college in which they take courses, they may be called "unclassified" or "special" students.

Opportunities for part-time work are limited because of the "round-the-clock" nature of hospital work. Most of the part-time jobs are in the hospital offices. The period of internship, an important part of medical education, requires full-time concentration, with duty every other night and every other weekend. But after finishing this intensive period of training, a person with a medical education may choose to do research work on a regular schedule.

Rugen:

There are two health fields that have not been mentioned in the formal part of our program: medical technology and physical therapy. Training for these fields consists of three years in the College of Literature, Science and the Arts and one year in the Medical School and University Hospital. Clinical experience is also offered at University Hospital for occupational therapy, but at present no program is offered at The University of Michigan. Requirements for the programs in Medical Technology and Physical Therapy will be found in the Announcement of the College of Literature, Science and the Arts.

Discussion:

> I am a dietician living in Flint. Right now, I am working seven days a week, and am away from my husband and children at all meal times. I would like to find a job with a less demanding time schedule. Are there jobs teaching in nursing schools or

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*Cleary College in Ypsilanti, Ferris State at Big Rapids, Flint Community Junior College, Kellogg Community College in Battle Creek, and Schoolcraft College in Livonia all have training programs for medical secretaries. Highland Park College offers a one-year Medical Office Assistant Course which includes the training requested by doctors of the Wayne County Medical Association.

> working in laboratories? What would the requirements be for such jobs?

Rugen: The School of Public Health at The University of Michigan has a program in public health nutrition for properly qualified dieticians who have had an internship at an accredited hospital. You should contact Miss Beeuwkes* for advice regarding positions and further preparation; you ought to follow up "ads" in the Flint paper which list openings in "food science."

> I am from Flint, too, and I represent a group of women who are interested in practical nursing. Can anything be done about the maximum age limit for women who wish to enter training?

Comments by members of audience: Is there really an upper age limit for beginning students? This sounds most unusual! I can hardly believe that this is true!

The panel: There are schools to train practical nurses in almost all the major cities in Michigan.** The minimum age is the principal restriction. Age limitations are being relaxed in most places, but physical stamina is still an important consideration.

> My home is in Canada, and I have been interested in the new experiment in Toronto where nurses training is being offered for women 30 to 50 years of age. The courses are given Monday through Friday for two years, with academic work and

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*Adelia M. Beeuwkes, Professor of Public Health Nutrition.

**Age limits for practical nursing courses vary throughout Michigan, according to information on file at the Center for Continuing Education of Women. At Flint Community Junior College the age limit is 18 to 45, and at Kellogg Community College in Battle Creek, the limit is 18 to 50. Reported age limits for programs established under the Manpower Development Training Act (1963) are: 18 to 55 in Alma, no maximum in Coldwater, and 18 to 50 in Dearborn, although some exceptions are made.

> clinical experience alternated.* Is
> there anything similar in Michigan?

Russell: In Flint, Dearborn and Battle Creek, there are community or junior colleges with two year programs now. You probably would have to inquire as to age limitations at the individual institutions.**

> I am a diploma nurse with three
> years' experience. I want to know
> why The University of Michigan
> will not give me any credit toward
> a bachelor's degree in nursing for
> all this work.

Keller: In schools granting diplomas, often the courses have been given only for nurses and are not equivalent in content to courses that are part of a university curriculum.

> I don't want to repeat the training
> I've already had in order to get a
> degree. I should think the diploma
> should be worth some credit toward
> a degree.

Russell: The University of Michigan has 750 students in the School of Nursing and also trains clinical specialists and future teachers of nurses in the master's degree program. This is the school's chief objective, and so far there is no program designed for the three-year diploma nurse who wants to earn a B.S. degree.

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*The Quo Vadis School of Nursing, with a two-year program for women 30 to 50, opened in September, 1964. The first class of 32 was selected from 616 who inquired about the school during the previous year. "Intensive studies of nursing education by members of the Catholic Hospital Conference of Ontario in 1962 and 1963 indicated that not enough was being done to attract older women into nursing. It was thought that the recruitment of such women would provide a stabilizing influence on a profession characterized by rapid turn-over in staff and that they would be attracted by a school which was set up exclusively for older women, with a program designed to meet their specific needs." Catherine D. McLean, in The Quo Vadis School of Nursing, a Progress Report (Toronto, February 28, 1965), pp. 1, 3.

**At Flint Community Junior College the age limit for the Associate Nursing course is 18 to 45. Henry Ford Community College in Dearborn has an age limit of 18 to 50. Students of any age are considered for admission to the associate degree program at Kellogg Community College in Battle Creek, so long as they meet the college requirements for admission.

> But I feel I need to get a degree as soon as possible. I am a widow with two children in elementary school, and so far I have only a diploma. What can I do?

Russell: Both Wayne State and Michigan State have programs for the diploma nurse. You might try these universities. Our facilities are limited, and with 267 new students in the freshman class, we have all we can handle. The problem of fitting a diploma graduate into college courses in nation-wide. Each case requires an evaluation of the applicant and the school attended. Sometimes qualifying examinations are used to judge the value of previous education.

> Working in a hospital, a diploma nurse is at a definite disadvantage from the point of view of status, if not wages.

Nelson: I doubt if any distinction is evident when promotions are made. Many factors besides education enter into success in the nursing profession. Mrs. Russell, how many head nurses at University Hopsital have diplomas and how many have degrees?

Russell: I will have to make an estimate, but I think that two-thirds of the head nurses are diploma nurses.

Nelson: Ten years from now, I don't think there will be any more three-year schools. The trend is toward either two or four year educational programs. But it is perfectly apparent that there is an increasing demand by R.N.'s with diplomas for educational programs which will lead to the B.S. degree.

> Right now I have to stay at home because my children are still young. But I would like to find some way to keep my training up to date until

> I can return to the nursing profession. I'm not interested in a temporary refresher course, but in some kind of a permanent set-up at local centers which would be easy to get to, with classes maybe once a week. A course like this could go on for even ten years. It would help nurses keep up with new ideas and methods, so they could return to work without finding their knowledge obsolete.

Comment by participant: It would be wonderful to be a nurse, a real professional, just an hour or two a week, and not always a mother!

Russell: The University of Michigan School of Nursing welcomes all suggestions for useful instruction, but we have the pressing problem of needing more money, teachers, and space.

Rugen: A course such as the one suggested might be offered through the Extension Service of the University.

> Is there a degree program for training public health nurses?

Rugen: The bachelor of science degree in public health nursing is no longer granted at The University of Michigan. Public health nursing is now a one-year graduate program at the University. Anyone interested in this field should write Miss McNeil* for advice, to be sure that the courses elected as an undergraduate will be acceptable as prerequisites for graduate study. Some federal stipends are available to students in this program.

Research in the field of public health is another avenue opened up by a year of graduate study.

> What is required for teaching nursing at the college level?

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*Ella E. McNeil, Professor of Public Health Nursing.

Keller: Basic to the teaching of nursing is having the content to teach. Wayne State University is the only institution in Michigan which gives a master's degree in nursing education. The University of Michigan grants M.S. degrees in clinical graduate programs.

Comment by Mrs. Burlingame:* I am a grandmother with a little advice to offer. I graduated from The University of Michigan with a B.A. degree and took Occupational Therapy training at the University Hospital simultaneously. (This curriculum used to be offered at University Hospital.) Later on, while I was raising my family, I studied horticulture at Michigan State University. Now, I've combined these two fields into what I call "Horticultural Therapy," which is a twelve month program for treating those who are mentally or physically ill, using facets of Horticulture. Requests come from all over the country and Europe from technicians who want to know more about this new effective method. My advice to women at home with families, who hope to work outside the home in the future, is to take courses until you have time enough to take a job.

LIBRARY SCIENCE

Chairman: Frederick H. Wagman, Director of the University Library

Wallace J. Bonk, Chairman of the Department of Library Science

Roberta C. Keniston, Assistant Librarian, Eastern Michigan University

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*Alice Wessels Burlingame, author and speaker, is a member of The University of Michigan Alumnae Council Committee for the Center for Continuing Education of Women. She started the first program in therapeutic gardening, at the Pontiac State Hospital, not far from her home in Birmingham, Michigan.

TRAINING OPPORTUNITIES FOR MATURE WOMEN THROUGH THE UNIVERSITY OF MICHIGAN DEPARTMENT OF LIBRARY SCIENCE*

Admission to the Department requires a bachelor's degree, with at least 90 hours of liberal arts. No time limit is set on the date of the bachelor's degree. There is no pretesting of applicants. Admission is based on the quality of the undergraduate work and on the personal characteristics of the applicant. A grade-point average of at least 2.75 is required, where A equals 4. With the increasingly heavy pressure for admission to a program whose enrollment must be limited, relaxation of entrance requirements seems highly unlikely. Indeed, requirements might have to be raised.

Students are not required to enroll on a full-time basis. Combinations of work and part-time study are very common. Many housewives have taken part-time work while devoting the rest of their time to their families.

EMPLOYMENT OPPORTUNITIES

In the various types of libraries, there is a wide range of work experience which would appeal to women of varying backgrounds. Of course, some employers hesitate to hire women over a certain age because they would not be able to put in enough years of service. Pension systems often affect employment opportunities, too. Geographic area is another factor to be considered. In spite of a general shortage of librarians, there may not be a shortage in a specific locality. If a woman must stay in a particular town, she may find that there are not openings at a given moment.

There are currently at least 7,000 positions actually carried on the budgets of libraries for which they cannot find trained librarians. Many factors combine to assure that the demand for librarians will continue: the growth in populations, the greater use of libraries by an increasing number of students, and the rising level of education. School libraries, public libraries, college and university libraries, and special libraries are all seeking qualified, competent workers. For school library work, an applicant usually is required to have a teaching certificate. On the other hand, those women who do not have a certificate but are interested in work with children and young people, can find jobs in public libraries which are eagerly seeking children's librarians. Libraries are interested in people who have the qualities the profession needs for effective service. To meet the need for librarians, the Department is not expanding its enrollment at any cost, but seeks able students.

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*This background information was given to all participants in preparation for the afternoon workshops.

LIBRARY SCIENCE - Abstract of Proceedings

Frederick H. Wagman, Director of the University Library:

The modern library's task is to make available the entire human record—no mean assignment—and libraries are now being upgraded accordingly. In "The Great Society," libraries have been given an important role as is reflected in plans and legislation for general education as well as in specific new legislation for libraries. The current Higher Education Act; the Library Services Act of eight years ago, and, more recently, the Library Services and Construction Act are evidences of governmental interest at the national level in this field.

Schools house the great preponderance of our libraries. Although only 20% of our elementary schools have central libraries, most of our high schools do, as well as junior colleges, colleges and universities. There also are many libraries independent of schools—research libraries, business, recreation, museum, art, rare book libraries and so on. About 16,000 of these non-school libraries are in existence today.

Libraries are no longer simply, or even primarily, quiet cloisters for scholars. The term "library work" covers a wide range of activities which are intellectually and physically strenuous: story telling to pre-school children, guiding young readers, helping with school curriculum, selecting and cataloguing books. Cataloguing is a job with many ramifications since it involves essentially the organization of human knowledge. This procedure can be very arduous intellectually, as it is in The University of Michigan library which has 3 1/2 million volumes.

As the store of knowledge expands, it becomes increasingly important to keep knowledge available at the right time and place. The great cost of searching for information is illustrated by a story currently making the rounds. It seems that one scientific organization estimates that the budget for a research project in some scientific fields should be at least $50,000 before it becomes worthwhile to find out whether or not the area proposed for investigation has been adequately studied. If less than $50,000 is involved, it is probably cheaper to go ahead and do the research than to pay the cost of searching previously printed literature in the field. This is undoubtedly an exaggeration, but the cost of literature searching in some subject fields is fast approaching this magnitude. The importance of literature "searching" is illustrated by the fact that people died of typhus who need not and would not have died if the discovery of DDT before World War I had not been effectively buried in the literature.

The library is contributing to many challenging human endeavors in contemporary society. The library has an expanding role in support of all research. The library is an agent in helping the functional illiterates through literacy programs. As the work-week becomes shorter and there is more leisure time, the library takes on additional responsibility for recreational and self-development activities.

A large area included in "library work," but calling for quite different skills from those of the traditional librarian, is the management of libraries. The selection and direction of personnel, operations analysis, public relations, budgeting and finance—these are all part of the work of libraries. The University of Michigan Library is now programming its business operations to include the use of computers, a change which will reduce the number of routine clerical jobs. We must find simpler and better ways of doing many things as libraries take on more of the characteristics of industrial organizations.

The demand for personnel trained in the various aspects of "library work" is growing. In 1962, 4500 librarians were required simply to fill budgeted vacancies. By 1965, 8000 replacements should be available. If national standards were met (and there is no immediate prospect of this at all), 125,000 additional librarians would be needed: 10,000 in public libraries, 112,000 in school libraries, and 3900 in colleges and universities. The current number of librarians trained each year is very small compared to the present job openings. Each year only 2500 to 3000 librarians have come out of our library schools, 2000 from accredited and 800 from non-accredited schools.

The great pressure for more librarians is being created by the fantastic growth of information which the libraries must store and retrieve. More schools will be built in the next few years, adding to the number of libraries and librarians needed. As people move into the suburbs and create new communities, there will be demands for libraries to follow them. Automation which brings with it the need for reeducation will bring new demands on the libraries of our nation.

How can we attract people into this vital field? Most of the rewards of the profession are intangible, for the pay is not very high. Salaries range from $6000 a year, which the American Library Association has set as a minimum, to about $30,000 which is the salary paid to the Directors of a few of our largest library systems. In general, school librarians are paid about the same amount as are school teachers.

The profession is now largely composed of women, although the percentage of male librarians is growing all the time. There are a good many non-professional as well as professional jobs in libraries. At The University of Michigan, the split is about fifty-fifty. As the shortage of librarians increases and the demand rises, trained librarians are going to be reserved for very specialized activities and non-professional jobs will become more numerous.

One of the intangible rewards of a librarian is the opportunity to pursue a variety of activities using many special talents and interests. Geographical mobility is another advantage of this profession. Employment is virtually guaranteed to trained librarians almost anywhere in the country.

Wallace J. Bonk, Chairman of Department of Library Science,
University of Michigan:

Liberal arts training is stressed in the requirements for a library science degree in the belief that these studies provide the broad background, and presumably the informed judgement, that library work demands. With the ideal of the Renaissance Man" in mind, we hope that prospective librarians will be people who have alert, inquiring minds, who are intent on expanding their own education, though not necessarily through formal courses.

The Library Science department requires thirty hours of course work for its Masters of Library Science degree. Of this total, two courses must be outside the field of library science. In addition, there is an array of required library courses and array of electives. The degree candidate must maintain a "B" average and develop a reading knowledge of one modern language in addition to English: French, German, Spanish, Italian, Portuguese, Russian, Arabic, Chinese, or Japanese. Work may be scheduled on a full-time or part-time basis; it may be completed by attending classes only during the summer.

At present, our department is so pressed for space that we must curtail enrollment and turn away fully-qualified applicants. New buildings are expected, but not for two or three years. This is the plight of library schools across the country. A couple of partial solutions to the problem of admission can be suggested. Although campus enrollment is stringently limited, enrollment is not restricted in off-campus courses given through the extension service. Extension courses are offered in Grand Rapids, Flint and Detroit. One six-hour enrollment at the Ann Arbor campus is required before a degree is finally granted—the only on-campus work required. Another possibility is librarianship without a graduate degree. School library jobs require only a teacher's certificate plus eighteen hours of library science, rather than thirty hours for a Master's degree. This choice expands the number of state schools at which one can pursue library science without proceeding to a Master's degree. Library Science training is available at Eastern, Western, Central and Wayne.* Only The

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*Eastern Michigan University (Ypsilanti), Central Michigan University (Mt. Pleasant), Wayne State University (Detroit), Western Michigan University (Kalamazoo). A full list of all Michigan institutions offering library science would include in addition: Andrews University (Berrien Springs); Ferris State College (Big Rapids); Northern Michigan University (Marquette); Sienna Heights College (Adrian).

University of Michigan and Western Michigan are accredited by The American Library Association.

Financial aid is available for advanced degrees in library science. Under the Library Work-Study Program, the student spends part-time at work, part at study. Master's requirements can be fulfilled in about two years in this fashion.

Roberta C. Keniston, Assistant Librarian, Eastern Michigan University:

As a woman who returned to college for training after her children were in school, I am able to speak from personal experience. The department of library science at The University of Michigan has been particularly receptive to returning women, providing both full-time and part-time programs, as well as work opportunities in the library. By taking advantage of such adjusted schedules, a number of returning women of various ages have been trained and placed in highly gratifying jobs.

In working toward a degree, I pursued a low-pressure program of one or two courses a semester. At this pace, it took me four years to get a degree, but necessitated only minor adjustments in the schedule of the rest of the family.

I have found that the various facets of work in libraries give people a chance to make use of their diverse skills and interests. Working with young adults, for example, is a new and rapidly developing field in library work and a departure from the days when libraries were not prepared to accommodate noise and occasional high spirits. Cataloguing requires a keen analysis and discrimination of materials. Book acquisition is considered one of the most challenging activities since it demands not only the ability to evaluate books, but also a knowledge of book-ordering and other business matters. Here interest and training in business administration is valuable. Work in research collections, in the fine arts, medicine, and business administration, for example, and assisting scholars in their research are other aspects of library work calling for differing talents and interests.

In the Ann Arbor vicinity, library work can be performed in a variety of settings. First of all, we have a number of public libraries: The Ann Arbor Public Library, the Washtenaw

County Library, and the Wayne County Library which has thirty or more branches. School libraries are part of the public educational facilities in Ann Arbor and in neighboring towns. There are college and university libraries at The University of Michigan, and ten miles away at Eastern Michigan University. Concordia, a new denominational college on the edge of Ann Arbor, has a library at the junior college level.

Among the special libraries of the community are those in hospitals such as St. Joseph's Mercy Hospital, and the Veteran's Administration hospital, where there is a library for patients and one for the medical staff. The resources of these libraries are used for bibliotherapy, a new field providing reading which supports the therapy prescribed by the medical staff. Of the local industries, both Parke-Davis and Bendix have well-established libraries and careful bibliographic workers are in great demand at University Microfilms.

At this moment, there are some unusual opportunities for doing library work. For example, the Mental Health Research Institute at the University needs a librarian to do research for the staff, and a scholarly journal about to move to Ann Arbor is looking for a librarian.

Discussion:

> Do librarians come up from the ranks?

Wagman: Librarianship is striving to receive recognition as a profession and professional training is usually desired. However, they might come from academic life or government work if they don't come from library school.

> Because of the shortage of librarians, might some exception be made to the requirements for a teacher's certificate?

Bonk: You should really go to the School of Education office to find this answer. Although the situation varies by state, school librarians generally have to be certified as teachers.* The North Central Association, which accredits the schools, remains very firm about this requirement, despite the lobbying and efforts of librarians. In Michigan, certification means 15 hours in Library Science in addition to the work in Education.

How do you get the 15 hours of Education courses?

Bonk: These can be taken at any college, not necessarily at The University of Michigan.

What is the policy on an expired teacher certification?

Bonk: Usually a student is required to take one or two more Education courses. Expired certificates present no particular problem: the demand for school librarians is such that expired certificates usually will be renewed without difficulty. Of course, certificates are NOT required in universities, colleges, or public libraries—only in schools.

Why don't library schools take the initiative in saying they can give the college-educated woman the courses that are necessary for accreditation?

Bonk: The State or other accrediting agency determines the education requirements. If you can't get a teacher's certificate and wish to work with children, the public libraries still need people to work with children. The public libraries have now taken on a tremendous burden of service to the high schools and also in some places to the college students. Students who live at home often find it more convenient to use the public library or a branch. This is an exciting period of development in the public library.

Is any financial help available?

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*Through The University of Michigan Extension Service, Library Science courses are offered at Extension centers in Detroit, Grand Rapids, and Flint.

Bonk: Work-study scholarships represent the best opportunity. No other scholarship aid is available specifically for Library candidates; Rackham scholarships have pretty well disappeared; National Defense Education Act grants are restricted to undergraduates.* Loans from the University, at 3%, represent another alternative. As these loans have to be repaid within the year that the money is borrowed, they are useful to students who need to meet lump expenses, such as tuition, by stretching them out on an installment basis.

Comment: Another possibility is to take courses while children are at school, to avoid baby sitting expenses.

Are there any special problems for mature women in being admitted to the Library Science program?

Bonk: The maximum number admitted to the master's program has been 290; now the growth control formula for the University suggests that this number be rolled back to 250. Applications should be filed early, as qualified applicants are selected as they come in. If the quota is reached before July first, enrollment for the fall term would be closed then.

How much time can I take to get the required number of hours if I study part-time?

Bonk: Six years could be used.

Is it more difficult for mature women to get jobs?

Keniston: Hiring of mature women has sometimes been limited by two factors: 1) eligibility requirements for pension plans; 2) the mobility of all people in our society makes the projected length of service for any employee much shorter than it used to be; an older librarian can thus be expected to be as "valuable" (in terms of expected years of service) as a younger one.

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*The 1965 revision of the National Defense Education Act enables graduate students to get aid.

At what time are Library Science courses given in Detroit?

Bonk: Most courses at the Rackham Center in Detroit are now in the evening, but we hope to be able to offer course work in the morning as well.

Is specialized training required for a master's degree in Library Science?

Bonk: This can ordinarily be gained through electives in the master's program. There is no expectation that a student needs to go beyond this program to prepare for such specializations as bibliographical work, book selection, etc.

Is The University of Michigan developing new forms of information retrieval and audio-visual storage?

Wagman: The University Library has not yet done anything in the development of new forms. It is busily automating the work of its acquisition department and will extend this program to its circulation and cataloguing work. We do use various forms of miniaturization, of course, such as microfilms, microcards, microfiches, etc.

What is the status of the B.S. in librarianship (formerly awarded by the Departments of Library Science)?

Bonk: When this is held as a second degree, in addition to a bachelor's in liberal arts, it can serve as the equivalent of a master's. It can also be used as a prerequisite for the special program in an advanced masters. This is a twenty-four hour program (minimum required by the Graduate School), divided into twelve hours of Library Science and twelve hours of cognates.

MATHEMATICS, PHYSICAL SCIENCE, ENGINEERING

Chairman: Glenn V. Edmonson, Associate Dean of the College of Engineering

Bernard A. Galler, Associate Professor of Mathematics and Research Associate, Computing Center

Adon A. Gordus, Associate Professor of Chemistry

Helen Dodson Prince, Professor of Astronomy and Associate Director, McMath-Hulbert Observatory

WOMEN IN PIONEER FIELDS*

To introduce workshop participants to one of the most advanced developments in computer technology, a short film entitled "DAC-1" will be shown at the opening of the session. This particular device not only computes, but actually displays curves and helps in solutions of problems of engineering design. The use of computers has created a new job classification, that of the "computer programmer," which is currently popular with women. Knowledge of mathematics and statistical procedures is basic not only in engineering and in the physical and biological sciences, but also in such fields as psychology and economics.

The University offers many courses of study leading to professional employment in science and engineering. These are described in University of Michigan catalogues and bulletins. After training is completed, students occupy a variety of positions in educational institutions and in government or industrial organizations. There are opportunities for women as teachers, research workers, technicians, and technical writers. Some of these jobs require only a bachelor's degree. If a woman has not been working in her field for several years, however, additional training is naturally required in order to become familiar with current research trends.

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*This background information was given to all participants in preparation for the afternoon workshops.

In the past, science and engineering have been considered "pioneer fields" for women, but there is evidence now of a dual change in attitude. Women are more willing to enter these fields and are more readily accepted. Yet special determination and dedication may be demanded of women who wish to reach the top professionally.

Astronomy is the only physical science in which an important percentage of women have already been active for many years. At the McMath-Hulbert Observatory in Pontiac and at the Department of Astronomy on the University campus, there are opportunities for women to participate in study programs and to make significant contributions in this field of research.

MATHEMATICS, PHYSICAL SCIENCE, ENGINEERING WORKSHOP - Abstract of Proceedings

Glenn V. Edmonson's Introduction:

I would like to define continuing education as a procedure for "extending to society by an institution the opportunity for a time dependent, systematic development of the mind of the individual." In continuing education a definite commitment is undertaken both by the educational institution and the individual student, who thereby share joint responsibility for academic achievement. Continuing education is not only the problem of women, but also of professional workers, such as those in different branches of engineering. These people, too, find themselves faced with problems involving lack of familiarity with the world around them, lack of sufficient training to do the best possible job, and a lack of information necessary for advancement.

Bernard A. Galler: Mathematics and Computer Science

There are opportunities for women in many branches of mathematics including: statistics, actuarial mathematics, operations research, pure mathematics, and computer science. I am going to speak chiefly about computing since it is my own field of interest, and also because of its current importance. One-half of the students graduating in mathematics last year went into computer work. About 35,000 people are entering this field each year. The field is so new that courses were not even given in colleges when many of the women present were in school.

A computer is merely an aid to solving problems. It is an "idiot" to everyone except the person who understands the logic of its operation. To give you an illustration, a computer could be used to solve the problem of making change. For example, "What coins should be used to make change of 97 cents?" To solve this simple problem, first a rule is established; then a set of machine instructions—a program—is written and given to the machine. So that you can see what this particular program looks like, I will pass out mimeographed copies of the machine instructions. The diagram at the top of the page indicates the strategy, or rule. The dozen lines of type at the bottom of the same page comprise the "program."*

One of the most advanced developments in computer technology is the "DAC-1," a term which stands for "Design Augmented by Computer." In the automobile industry it has taken three years to make major design changes and carry them into production. With the aid of "DAC-1" General Motors Corporation hopes to make design changes in much less than three years. The "DAC-1" system employs a man-computer team, including a graphic console attached to a multi-programmed high speed computer. A designer sits at the graphic console which has a screen similar to a television screen. The screen serves as a direct two-way communication link between the designer and the computer. By pushing a button the designer can instruct the computer to show a particular section of a design on a screen. By writing on the screen with an "electric pencil," the designer can add to, augment, modify, or delete from the design, and the computer responds instantly. If the designer wishes a permanent copy of a design, the computer can reproduce a photocopy in thirty seconds.**

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*The one-page description of this "change-making problem" has not been included in the Proceedings, but copies are available on request.

**A short film showing the operation of the "DAC-1" was presented at this workshop session. The "DAC-1" is described in the October, 1964, issue of Search, a publication of the General Motors Research Laboratories.

Computer design is a field with many opportunities. Necessary background includes a knowledge of electrical engineering and logic. On the other hand, if you wish to use the computer as a tool, you should secure advanced training in a special field such as biological science, mathematics or linguistics. If you are interested in computer work itself, the following courses in mathematics are helpful: programming, statistics, probability theory, linear algebra, differential equations, logic and numerical analysis. Of course, many persons without mathematical knowledge can use computers in business applications.

Adon Gordus: Physical Science

One problem for all scientists is the large volume of scientific papers appearing daily. It is estimated that the amount of material published in journals has doubled in the past seven years, and the number of scientific articles appearing daily would fill seven complete sets of the Encyclopedia Brittanica. The process of handling all this printed material opens up a variety of careers suitable to women with some scientific training, perhaps a bachelor's degree. There is also a demand for scientific abstractors with a knowledge of foreign languages to help condense the vast body of literature published in many different countries, so that a scientist can keep abreast of international developments in this field.*

Technical writers and editors must be able to write reports from a scientist's rough notes or translate from the chemist's language to the layman's language. Many scientists have a good grasp of their fields, but have lost their grasp of the English language. Since international meetings are becoming more frequent, translators are needed for such languages as Russian, Spanish, French and German.

Jobs as laboratory technicians are readily available for women with bachelor's degrees in chemistry, even if these degrees were earned some time ago. But I would like to urge these women to become familiar with the new transistorized equipment and instruments now being used for research. In both chemistry and physics, as well as the biological sciences, there is a need for people who can use computers.

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*Through the Office of Research Administration's Editorial Office, translators are available for the following languages: Arabic, Czech, Danish, Dutch, Finnish, French, German, Modern Greek, Hungarian, Italian, Japanese, Norwegian, Persian, Polish, Russian, Spanish, and Swedish.

Secretarial training combined with a scientific background is useful for positions such as administrative assistants, as well as technical writer or editor. An administrative assistant is a woman who can administer a research project, write, edit and assist in a laboratory. The field of technical illustration seems to be particularly suitable to women. Most publications require some graphic arts work, drawings of graphs or data curves, drawings of models and equipment. Then there is the whole field of medical illustration. From the point of view of financial rewards, some of the most profitable occupations call for a combination of science and other fields such as art, writing, a foreign language, or mathematics.

Glenn Edmonson: Engineering

Engineering is going through a major revolution. The old image of the engineer as the man with the tin hat and dirty boots is fast disappearing. I would describe an engineer as "a professional person who knows and understands the results of scientific research. He is motivated to use these results, his ability to apply mathematics, physics, and natural sciences, and one or more of the engineering arts to demonstrate technical and economic feasibility of the design of new or improved systems, products, and processes for the benefit of the society in which he lives."

As part of their revolution the engineers are trying to overcome their prejudice against somen, but as yet women are not admitted to some of the professional engineering societies.* During the current academic year there are twelve or fifteen women enrolled in the School of Engineering at The University of Michigan. One is a Ph.D. candidate. We also have a woman on the faculty who is an associate professor of aeronautical engineering.* In the future the number of women in engineering undoubtedly will increase. Every engineer is going to need three assistants, and many of these positions could be filled by women.

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*The Society of Women Engineers is located at 345 E. 47th St., New York City.

A new program here at the University which may be of particular interest to women is in bioengineering. In this program the physiological systems are studied from an engineering point of view. Faculty of the College of Engineering, Medical School, Dental School, School of Public Health, and Literary College are cooperating in the development of bioengineering studies.

Helen Dodson Prince: Women and Science

I regret that I have but one life to live; there are so many interesting things to do. I do think it is time to remove the image of the genius as the only scientist. Actually, science is the redemption of the average person. Science needs people who are careful, orderly, and thoughtful. It is only necessary to make careful measurements, organize your material, and form and test an hypothesis in order to add at least a little to the body of trustworthy knowledge. The more a woman learns, the more she can contribute. Being a "wonderful colleague" to a fellow scientist would be a great contribution.

Before you go forth, be sure you know the real reason you are leaving your home—whether it is for experience, intellectual satisfaction, or financial gain. It is important to remove the myth that women can do something outside the home without any sacrifice. It is not easy to arrange things as we would like to have them. There is a limit to what women can do; and no reason to believe a woman can hold a full-time job, raise children, and care for a husband and a home any better than a man could do all these things at once.

If you do decide to go on in a scientific field, do not wait. There is no absolute need for spoon-fed reviewing. Relearning can be done at home while caring for children, but it is the hard way. A classroom makes study easier, but it is not a necessity.

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*Dr. Pauline M. Sherman is Project Supervisor of the Aircraft Propulsion Laboratory.

All the physical sciences are open for contributions from women. Don't underestimate your own ability, and don't underestimate what you can do. Bring to the sciences your judgment, advice, wisdom, and evaluation, all of which come from critical study. In the scientific world, women are in a transitional state, with their "feet in several troughs."

Astronomy is the only physical science in which a high percentage of women have participated for decades. At our observatory right now there are tasks that could be performed by anyone in this room. The salaries are nothing like those in the engineering field, but they are respectable. In the search for truth, the great need is for trained minds.

Discussion:

A list of math courses useful in the computing field was given. At what level are these courses offered?

Galler: At the Junior, Senior, and Graduate levels.

Are there prerequisites for these computer courses?

Galler: Yes, generally calculus is needed. If you have a bachelor's degree, you probably satisfy the requirements.

What make computer is used in conjunction with DAC-1?

Galler: An IBM computer. Some other computers are being used this way elsewhere.

Where do we go to seek help in finding employment in technical areas?

Galler: University of Michigan Placement Bureau or the College of Engineering Placement Bureau or the Center for Continuing Education of Women.

Most technical papers from all over the world are now immediately translated into English. Is there any need for technical translators here?

Gordus: Yes, such translators can be hired through the University when they are needed.

What other languages are used at international meetings?

Gordus: Mostly Russian. There is less and less use of German and Spanish.

Bernard Galler:

In closing, I would like to suggest that people interested in computers may wish to attend the four or five lectures given in Natural Science Auditorium, Ann Arbor, at the beginning of each trimester. These are free of charge and open to the public. For further information you can contact the Computing Center at the University of Michigan.

LIBERAL ARTS PROGRAMS FOR UNDERGRADUATES

Chairman: William L. Hays, Associate Dean for Administration, College of Literature, Science, and the Arts; and Professor of Psychology.

Horace M. Miner, Professor of Sociology and Anthropology; and Associate in Research, Museum of Anthropology

Alfred S. Sussman, Chairman of the Department of Botany

Marvin Eisenberg, Chairman of the Department of History of Art

James H. Robertson, Associate Dean, College of Literature, Science and the Arts; and Associate Professor of English.

EDUCATION IN LIBERAL ARTS*

Traditionally, an education in liberal arts has been regarded as furnishing a broad perspective on man, his history, and his works. Now, more than ever, in a period of accelerating social, cultural, and technological change, the liberal arts tradition must continue to serve as the frame of reference for the person who wants to understand the world about him, and to bring a measure of balance into his own life.

A liberal arts education is also an asset in seeking employment. During four years at the University, a student receives training in research methods, in the use of library facilities, and in laboratory procedures. Knowledge of languages is often a requirement for positions with business firms or other organizations which come in contact with citizens of foreign countries. Ease in the use of language can be used creatively, or in technical writing. All these capabilities developed in an academic environment, can be considered "marketable skills" as well as sources of personal satisfactions.

LIBERAL ARTS PROGRAMS FOR UNDERGRADUATES WORKSHOP - Abstract of Proceedings

William L. Hays:

The purpose of this workshop is to discuss the role of the College of Literature, Science and the Arts in the Continuing Education of Women conference. There are two significant angles to be discussed:

(1) Why is the literary college important to mature woman, and
(2) What are the career opportunities available to them?

At the outset, the point should be made that there is a conflict in the topic under discussion, since liberal arts education is not career oriented. This panel will explore and advertise the role of LSA* in relation to the mature woman returning to the University.

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*This background information was given to all participants in preparation for the afternoon workshops.

Of all the colleges at The University of Michigan, LSA is the largest with twenty-nine different departments, 9500 undergraduates and 3000 graduate students, plus part-time students from all the other schools. The subjects for study in this college include the entire spectrum of knowledge.

Look first at the advantages of training in the liberal arts as something that is "good for you," something that enriches life. Then, consider the advantages of a liberal arts education for women. Women are the transmitters of culture and a potent force in the shaping of our future. Since American culture is becoming more and more complicated, there are many utilitarian uses for additional knowledge. For example, a better grasp of mathematics would help in understanding the new math which our children are coping with today. Insight into the new scientific concepts would enable one to have a better comprehension of space development. There are rich opportunities in the cultural explosion in the fine arts. The acceleration in travel in western and non-western countries makes new demands on our understanding. I want to emphasize the fact that in modern society traditional values of a liberal education are more needed than ever before and LSA has unexpected resources which have hidden benefits.

A liberal arts education also has career advantages for, although not devoted to vocational training per se, it often leads to various jobs associated with a particular field. Training in sociology may lead to a variety of positions requiring such orientation. In the social action field, for example, people may be employed not as sociologists, but by agencies dealing with people in their social context. Majoring in psychology will not always lead to becoming a psychologist, but may be the beginning of becoming, for example, a psychometrician.

The College of Literature, Science and the Arts does not train people for the professions—the graduate school and special schools have this function—but a liberal arts education may make it possible for women to fill semi-professional jobs without graduate training.

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*On The University of Michigan campus, "LSA" is a common term used for the College of Literature, Science and the Arts.

Horace M. Miner:

I became sensitive to the problems of education for women some twenty-five years ago when I first began to wonder aloud why our society gives men and women the same kind of education and then expects them to lead quite different kinds of lives. I am even closer to the problem now, as I observe my wife returning to a profession after being away from it for many years, and as I see my daughter trying to continue her education since marriage. The basic problems are still the old ones of finding a role to fit the training or securing the training to fit the role of the modern, family-oriented woman.

Clearly, continued education can enlarge your living experience, as well as open up new career opportunities. There is much to be said in favor of learning how to live, rather than how to make a living, and the distinctive contribution of liberal arts training is to increase your understanding, enjoyment and competence in daily affairs.

Recent advances in knowledge have not been limited to the physical and natural sciences. The social sciences, too, are making an increasing contribution to our understanding of the increasing complexities of modern life. Women have long performed fundamental volunteer services in their communities and there is a growing need for such women to have had some basic training in the social sciences. Being a wife, mother and participating citizen is a career, in itself, and a liberal education contributes to better performance of all of these roles.

Undergraduate students often ask me whether, from an employment point of view, they should concentrate in cultural anthropology, psychology, or sociology. I have to tell them that, occupationally, a bachelor's degree in one of these fields is about as useful as a degree in another. None provides real professional specialization, but all involve training which bears on the immediate problems of life. Thus, to ask, "What kinds of jobs will this concentration lead to?" is to put the wrong question. Training in the liberal arts provides the fundamentals which open doors to new horizons of living and to the subsequent acquisition of specialized skills.

Alfred S. Sussman:

I should like to discuss the question of continuing education of women in the liberal arts from two points of view: (1) the impact of the generalized elements of the biological sciences, and (2) the vocational opportunities for women with a degree. Many aspects of the physical and biological sciences impinge on personal living. For example, we have problems with our water sources because we are pouring into our streams detergents which do not break down into compounds that can be used by plant and animal life. Are women knowledgeable about this and other problems discussed by Rachel Carson in her book, The Silent Spring?* Are women today well-informed concerning the problems reviewed by Secretary of Interior Stewart Udall in his book on community expansion and conservation?** There are other large questions: For example, can a microbiologist disassociate himself from the problems of germ warfare and other weapons technology? These problems can not be solved without public understanding of their implications.

As for vocational opportunities in the natural sciences; the jobs are here now. Industrial research laboratories, government laboratories, and private laboratories are looking for people with an A.B. or B.S. degree. Many jobs go begging. I have eight or ten on my desk now which I can't fill. What kinds of jobs are they? Some have to do with pharmaceutical research—working with antibiotics, for example. The field is rapidly expanding, notably in the Department of Agriculture and the National Institutes of Health both in Washington, D.C. and in their regional offices; in such laboratories as the Water Resource Laboratory which soon will be established in Ann Arbor; in Federal hospitals and in community hospitals and in university research centers. In my field of botany, a revolution has taken place as it has in many other fields. This means that new training is necessary. Training in the cognates such as mathematics, physics and chemistry provide a general background for coping with the new situations that will constantly arise.

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*Rachel Carson, Silent Spring (Boston, Houghton Mifflin & Co., 1962).

**Stewart Udall, The Quiet Crisis (New York, Holt, Rinehart & Winston, 1963).

Marvin Eisenberg:

As an historian of art, I would like to call attention to the fields including philosophy, the history of art and music, and the fine arts as a creative activity. Viewing this conference, I questioned whether women were here for vocational or abstract reasons. I rather sense the fact that women reach a stage in life in which there is an emotive or intellectual gap. I feel strongly that women can look to a role or function in society which is beyond the vocational one. They can add the "hyacinth value" to life. I refer to the passage in the Koran which says that if one has two loaves of bread, he should trade one for a hyacinth. A very primary reason for women studying and immersing themselves in the arts is to sharpen their sensibilities.

America is turning into a shambles due to wanton carelessness. One only has to drive out to Arborland, a shopping center in Ann Arbor, to see an aesthetic desert. How did this happen? All of us are responsible for our environment. This is but one of the developments that has recently overwhelmed Ann Arbor in the name of progress and is a potent reminder that we need to use our eyes and become more aware of the aesthetics of our environment lest personal affluence overwhelm us and the feeling for art and beauty in everyday life be lost. Through a study of the arts, women can and should play a critical role in a practical way to prevent aesthetic decay in our communities.

James H. Robertson:

I see my part on this panel as giving attention to prospects and procedures for women interested in completing their undergraduate degrees. Stimulated in large measure by the able and energetic leadership of the Center for Continuing Education for Women, an increasing number of women anxious to finish their degrees or to continue their formal education have been writing or talking with my colleagues and me.

Sometimes the desire for the degree springs from a need for psychological fulfillment, to complete what has been left undone; sometimes it stems from the need to achieve status and respectability within the family and the community. Most frequently, however, it comes from the more commendable ambition to qualify for a more useful, productive, and profitable "second career."

Whatever the reasons for wishing to complete the degree, there are special problems which most of these women encounter who need to re-enter the undergraduate college. First of all, the educational program of this College (and most American universities) is geared to the young undergraduate. These are a highly competent, alert, articulate group who set a fast pace in the classroom. Competition with these undergraduates is challenging and demanding. Secondly, all colleges have basic graduation requirements which must be met, requirements which are sometimes difficult to satisfy especially in such fields as foreign languages, sciences, and mathematics which build on past knowledge and skills. Finally, most colleges have a senior residence requirement which expects all degree candidates to complete their final year's work on campus. Married women with families generally do not have the time or freedom to return to the happy, carefree co-ed status.

What can the University and the Literary College in particular do about helping to solve these problems? My colleagues and I welcome the opportunity to sit down and talk with any woman about her individual educational status and goals. We are fully ready to give an informed, authoritative analysis of the feasible ways that the degree may be completed. More important, this College, along with other units within the University, is sufficiently humane and flexible to custom build special arrangements designed to meet the spirit if not the letter of degree requirements whenever this is possible. A number of women already have profitted from these arrangements and are steadily moving toward their degrees. Although not all enquiries can be so happily resolved, nevertheless there is a genuine willingness on the part of the University to assist and encourage women to achieve the satisfactions, skills, and the personal growth that the degree symbolizes.

Discussion:

Now that we are all motivated to return to college, what do we do about

> the fact that the University has closed its registration for the fall term?

Robertson: That would be primarily at the freshman level where the main crush comes. There is more flexibility for transfers or returning students. Although some introductory courses are oversubscribed, the upper level courses are still reasonably available.

> I have returned to the University but would like more counseling. In my experience the counselors look the student over and give her the feeling that she has no right to return to school. I want courses which do not require so much library work and vast amounts of reading. I have difficulty getting baby-sitters for such long periods of time.

Eisenberg: The University has to be very careful not to over-adjust to the exigencies of the individual student. There cannot be an individual prescription for each student. For example, if the University adopts a policy for commuters who cannot come in the morning, and for other people who are employed and can come only certain days a week, soon there is no policy, and no standard.

> Yet the first time I was in school the courses were very individual. This is no longer the case. I have trouble keeping up with school and my small children.

Hays: Here is a valid point that perhaps there should be women in counselor roles who have a grasp of women's problems.

Comment by another women participant: I was a counselor at another college. I have found that securing counselors who understand the motivation and level of anxiety of women continuing their education is also a complex problem.

Sussman: The role of the counselor is to advise women in a very realistic way in terms of their needs. A woman with two small children, for example, who came to me for advice might not be guided into my field, because she could not afford the time for numerous laboratory courses. On the other hand, were she able to meet the rigorous time requirements, there is no reason why she could not be trained in this field.

> But isn't it true that the woman who returns to school needs special assistance?

Robertson: First, the returning woman student needs to talk to someone in advance for planning. Second, the returning woman student should be very specific with the counselor about her time commitments. Third, there are relief escapes, if the woman finds she has attempted too much, such as dropping courses.

Miner: This new situation clearly calls for counselors to handle it.

> What do you do when the counselor says, "What are you doing here anyway? Why didn't you go to school at the right time?" I finally quit after five years of coming back and not being able to cope.

Hays: The academic life is a serious business and has standards which must be met which do not always suit the requirements of the individual student.

> What is being done for the woman who works all day and wants to return to school?

Robertson: This is a very difficult problem. We do, of course, have the Extension Service. Since we do not have enough teachers for our day-time classes on campus, we cannot at this time provide classes in the evening.

Hays: It will be some time before we can extend the range of the LSA program into evening hours.

> Is it true that one can transfer thirty hours credit from Extension courses?

Robertson: Yes that is correct, except when the senior residence requirement is involved.

> What is the criterion for being admitted to the special schools of the University?

Hays: You need to be admissible as under the regular University requirements for the particular school.

> What do you think about women taking up seats in the classroom? Should there be a quota? I am a student at Henry Ford Community College, and I feel I am entitled to go there. It is one kind of problem if Junior cannot get into college, and an entirely different one if Mother can not get in. Women should get out and do something about the problem politically.

Robertson: That kind of action may be needed. Aroused American womanhood can be a powerful political force.

> Is it a good idea for a woman to sit in on a course for a semester before taking the plunge to enroll for a program lasting several years?

Hays: Yes, it is a very good idea, one that I have recommended many times.

> Are the requirements for admission to the University the same for people who have been out of school as for new high school graduates?

Robertson: Yes. The Admissions people would look at the quality of any applicant's high school and college work in determining eligibility for acceptance. Special factors are also given special consideration. But the overriding consideration in every case is "CAN this applicant succeed at The University of Michigan?"

Do transfers take the Scholastic Aptitude test?

Robertson: Yes.

GENERAL UNIVERSITY INFORMATION

Chairman: Helen H. Tanner, Assistant Director, Center for Continuing Education of Women; Lecturer in History

Lawrence S. Berlin, Supervisor of Course Programs, Extension Service

Edward S. Bordin, Professor of Psychology, Chief of Counseling Division, Bureau of Psychological Services

Max W. Crosman, Assistant to Dean, Rackham School of Graduate Studies

Elizabeth M. Davenport, Assistant to Vice-President for Student Affairs

Byron L. Groesbeck, Assistant Director of Admissions

Alfred W. Storey, Associate Director, Extension Service; and Assistant Professor of Speech

Mildred D. Webber, Administrative Assistant, Bureau of Appointments and Occupational Information

LINES OF INQUIRY*

Women who already have clear educational goals, as well as those just beginning to formulate them, may have questions not related to particular academic areas:

. . .If I wish to continue my education, how do I start? How can I decide whether or not The University of Michigan is the right school? Will I be accepted? What are my previous courses and credits worth if I am transferring?

. . .May I attend the University part-time? Do I have to work toward a degree? After being out of school, can I compete successfully in classes with the younger students? How can I regain study habits rapidly?

. . .What may I take through the Extension Service and their Centers for Graduate Study? By Correspondence study? What assistance can I get from the counseling services? From the placement services of the University? . . . and many more.

The panel represents a broad range of University services, and specific questions and recommendations will be encouraged. At the beginning of the session, general University information will be surveyed through brief presentations by each panel member.

GENERAL UNIVERSITY INFORMATION - Abstract of Proceedings

Helen H. Tanner: Introduction:

The seven members of this panel have offices in many different parts of the University. I am going to ask each person to present a brief summary of a particular area, then we want you to be free to direct questions to the individual panelists.

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*These sample questions were included in the background information given to all participants in the afternoon workshops.

Byron Groesbeck: Admissions

The Admissions Office, which is in Room 1220, Student Activities Building, receives applications for admission to The University of Michigan except those for the graduate and professional schools and a few undergraduate programs. You probably are aware that admission to state-supported educational institutions in Michigan is not automatic upon completion of high school. A student must fulfill the entrance requirements for the institution he wishes to attend. At The University of Michigan, admission must be granted prior to taking any course for credit.

The admissions procedure includes several steps in addition to filling out application forms. An applicant also submits a school record or college transcript, is interviewed by an Admissions Counselor, makes an enrollment deposit, and takes a medical examination. The Admissions Counselor considers a prospective student's basic abilities and aptitudes for the course he has selected. A standard aptitude test is given to all entering freshmen, and to some entering upperclassmen in order to assist in admissions evaluation. With the current pressure on enrollment, I urge prospective students to begin the admissions process at least three months before the time they wish to enter the University. It is important to consult the University calendar listing registration periods for the three terms of the academic year. In this new schedule, the third term includes two half-terms during the summer months. We have a simplified procedure in the summer for auditors and for summer guest students. Another special admissions category is for students classified as "NCFD" (not a candidate for a degree.) These students have baccalaureate degrees, but are taking undergraduate courses in preparation for future graduate study.

Elizabeth Davenport: Counseling

Women who wish to continue their education are frequently hesitant about competing with underclassmen. Be assured that women have the advantage of motivation! In fact, studies have shown that in the University the student's ability to succeed does not decline in the higher age brackets. Women who return to academic courses do encounter special problems because of family responsibilities and the emergency situations such as children's illness.

There are twenty-nine counseling agencies on The University of Michigan campus. Seventeen are academic counseling agencies, and the rest do non-academic counseling in support of the academic program. The general philosophy of counseling at the University assumes that a student must be articulate enough to seek the particular service desired and must take the initiative in securing advice or assistance. A cross-referral procedure exists between all these agencies. The Student Affairs Counseling Office is the place to inquire, if a student has some doubt about the appropriate agency to contact. For each member of this workshop I have a copy of a booklet, "Guide to Counseling," which describes the services of these agencies in detail.

Max Crosman: Graduate School

There is no general admission to the University for graduate work. A prospective graduate student must be admitted to a particular department or professional school in which he is interested in studying. Applications for graduate study are received by the Rackham School, then referred to the proper academic department or professional school for their recommendation concerning admission.

The Horace H. Rackham School of Graduate Studies performs primarily an administrative function. It has no general academic counseling office since counseling is handled in the departmental offices. If a student has not completed a required amount and quality of undergraduate work, he may be advised to take additional undergraduate courses as an "NCFD"* in order to qualify for admission to a particular graduate program. Although scholarships and fellowships are available, generally these are not awarded until after the first year of graduate work has been completed and an academic record established at The University of Michigan.

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*"Not a Candidate for a Degree," a designation for a student who has not yet been accepted in an academic program leading to a specific degree.

Alfred W. Storey: Extension Service

The Extension Service is the arm of the University that extends services and programs to nine centers throughout the state of Michigan.* Any of these centers can give full information about course work in the outlying areas or in Ann Arbor. In general, the Extension Service provides limited term programs both on and off campus for special requests and needs.

Lawrence Berlin: Extension Courses

Both undergraduate and graduate courses are available at the Extension Centers, although the undergraduate offerings are rather limited. More courses are available in the professional and graduate fields such as education, library science, business administration, engineering, social work. Liberal arts courses are offered to support further graduate or professional training.

Undergraduate students should keep in mind the requirement that full-time work in residence at the Ann Arbor campus is required in order to complete their degree requirements. Extension students who wish to earn graduate degrees should apply early to the Rackham School in order to determine their eligibility for admission to a degree program. Advisers come from the Ann Arbor campus to the graduate centers to confer with prospective students.

In addition to offering academic courses for credit, The University of Michigan Extension Service cooperates with Wayne State University and Eastern Michigan University in supporting the non-credit programs given off campus by the University Center for Adult Education.**

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*Outside Ann Arbor, these centers are located in Dearborn, Detroit, Flint, Grand Rapids, Port Huron, Saginaw, Traverse City, and Escanaba.

**Robert Holmes is Director of the University Center for Adult Education, located at 60 Farnsworth Avenue, Detroit. Since 1957 when the Center was opened, more than 60,000 adults have enrolled in its classes. UCAE courses are given in several locations: Ann Arbor, Birmingham, Dearborn, Bloomfield Hills, Ferndale, Royal Oak, and Ypsilanti, as well as Detroit.

Mildred Webber: Placement

The Placement Service of The University of Michigan is part of the Bureau of Appointments and Occupational Information. Any student can secure this type of assistance free of charge. The activities of the Bureau are divided into four sections: career counseling, summer placement in jobs, educational placement, and general placement. In the educational placement division, the Bureau handles placement of qualified teachers in positions ranging from pre-school through college teaching and administration. The general placement service coordinates information about all other openings, in government, industry, business, and social service organizations. Career counseling is open to any students from freshman year on, and early use of this service is highly recommended. Summer jobs can be most useful as try-out experience in career planning.

Edward Bordin: Counseling Division, Bureau of Psychological Services

This particular service provides an opportunity to examine the factors involved in the choices that students must make. It exists to help students achieve a clearer understanding of themselves as individuals and of their abilities and objectives while they are functioning as students. As I see it, there are two general ways that the Counseling Division might be of assistance to women in continuing education. First, it could help a woman decide whether or not to continue in a path already begun. Second, it could help a returning student decide how to make academic use of the experience gained during the intervening years between a previous educational career and re-enrollment in the University.

Discussion:

What is the best time to request counseling service?

Bordin: Right now, there are long waiting lists of students. During the summer half-term, or between regular terms would be the best time. However, it is possible almost any time to arrange a fifteen minute interview with a staff member in order to identify the nature of the problem and appropriate procedures to follow. Many specific questions or problems call for referal to some other counseling agency. Our office is at 1000 East Huron Street, in the building formerly occupied by the Speech Clinic.

> Is a career aptitude test given on the campus?

Bordin: Aptitude and interest tests are used by the Counseling Division, when appropriate, as part of the process of helping a person understand himself. They are also available to adults and to high school students through the office of Professor Roeber.*

> The necessity of taking the SAT** seems to act as a deterrent to many older women who want to apply for admission. How do women score on this test compared to young students?

Groesbeck: For women admitted as part-time students, probably no testing would be required. If a test is required, it would be the American Council on Education Psychological Examination. This is given on the campus, but only in cases where there is some question about the academic record presented by an applicant for admission. The ACE test scores indicate reading speed and comprehension and the ability to handle verbal and mathematical symbols. No one should be apprehensive about this test because it serves only as a guide and is not the sole determinant of admission.

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*Dr. Edward C. Roeber, Professor of Education, is Director of the Counseling Laboratory located in Room 424 of the University Elementary School Building.

**The College Entrance Examination Board Scholastic Aptitude Test is required of all applicants who wish to enroll as freshmen in nine schools and colleges of the University of Michigan.

Will the Center for Continuing Education at Michigan set up special courses similar to those at Sarah Lawrence College described by Mrs. Raushenbush?

Tanner: So far, there are no plans for courses attended only by participants of the Center for Continuing Education of Women. We have felt that because so many courses are offered at the University and also because our participants have so many different educational interests, additional classes are not needed. However, if a group of women want a course in a specific subject and could attend class at the same time, probably a special course could be arranged. The Extension Service also could help to develop a new course. We are very eager to hear from women who have special educational needs and interests.

Could a student be admitted for graduate study in an area different from her undergraduate major?

Crosman: The answer would have to be given by the department or school a student wished to enter. No general statement could be made. If a woman wished to change her major and was deficient in the prerequisites for graduate study, she might be admitted as an "NCFD"* student and later become a degree candidate, with the approval of her department.

Tanner: This question calls attention to a typical problem faced by women returning to the University. Every case of this kind has to be handled individually, and the Center is glad to help returning students make the necessary transition.

To what extent can one pursue a master's degree on a part-time basis?

Crosman: Departments vary, in their attitude, and should be consulted in each case. Usually, it is possible to make arrangements. In many fields you are considered a "full time student" if you take only six or eight hours of work.

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*See ante, p. 111.

> I live near Port Huron, and most of the Extension courses offered there are in business and real estate. Would it be possible to have a course in art or literature?

Berlin: The University of Michigan Extension Service probably will not expand course offerings except in larger population centers.* Courses given in the smaller centers such as Port Huron generally depend upon the local availability of qualified teachers. It might be possible to develop circuit courses if other cities were interested in the same course.

Storey: You might be able to arrange for a specific course through Wayne State or Michigan State if enough people in Port Huron are interested to make the course financially feasible.

> Is there a Continuing Education Center at Michigan State University?

Tanner: Plans have been made to establish a Center in East Lansing. There are representatives of Michigan State attending the Conference here today.

> What are the possibilities for correspondence study at the University?

Berlin: There are courses offered through the Extension Service.** Courses at the freshman level are the major offerings. It is now possible to apply up to fifteen hours of credit earned through correspondence study toward an undergraduate degree at The University of Michigan. No graduate credit can be earned through correspondence study; although it is possible to study through the Correspondence Study Department to meet the language requirements for the Ph.D. degree.

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*Major centers of Extension study are in Detroit, Flint, Grand Rapids, and Saginaw, which have been designated as Graduate Study Centers by the Horace H. Rackham School of Graduate Study.

**Robert R. Wilson is Supervisor of the Correspondence Study Department, The University of Michigan Extension Service.

> Is the University giving any consideration to the possibility of offering television courses for credit.

Storey: A program for independent study is planned for the future, with television as part of the plan, but nothing definite has been proposed as yet.

Groesbeck: Television courses can be adapted to the humanities or the social sciences, but are not appropriate for laboratory courses in the sciences or in foreign languages that require use of the language laboratory.

Tanner: Since it is now time for the coffee hour that concludes the conference day, I hope you all can have the rest of your questions answered during informal conversation over coffee. As you leave, please collect whatever pamphlets interest you from the occupational information arranged in display racks along the aisles.

APPENDIX

BIBLIOGRAPHY*

From the wealth of reading material in the fields of women's roles today, her re-entry into the worlds of work and education, and from up-to-date specific occupational information sources, the following books, booklets, and magazine articles are samples which have been published recently and are available in local libraries and bookstores. For further information consult librarians, as there is much more available, or come to the office of the Center for Continuing Education for Women in the Michigan League.

BOOKS - General Information

Dennis, Lawrence E.	Education and a Woman's Life Washington, D.C., American Council on Education, 1963. $2.50 The proceedings of a conference on Continuing Education of Women held in Minnesota in 1962. Esther Raushenbush of Sarah Lawrence College is one of the contributors to this book. Several pilot projects of Centers for Continuing Education are described.
Farber, Seymour M.	Potential of Woman N. Y., McGraw, 1963. Paperback, $2.95. Report of the 1963 Symposium which had as its objective the defining of some of the questions which society must answer if women are to live the full and useful lives which their relatively new-found freedom has brought them.
Haber, William Ferman, Louis A. Hudson, James R.	The Impact of Technological Change: The American Experience. Kalamazoo, Michigan. The W. E. Upjohn Institute for Employment Research, 1963.

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*A few books and articles of special interest, published since March 16, 1965, have been added to the conference bibliography.

	A review of 20 years of research on technological change; identifies the four major problems which have received repeated attention: factors affecting re-employment of displaced workers, the process of finding a job, the mobility of displaced workers, and the economic and non-economic consequences of job displacement.
Journal of American Academy of Arts	Daedulus: The Woman in America 280 Newton St., Boston 46, Mass., 1964. The entire spring issue of this quarterly journal is devoted to the role of women today.
Mueller, Kate H.	Educating Women for a Changing World Minneapolis, University of Minnesota Press, 1954. Women must study for themselves their precise status in each of their present roles as wives, mothers, citizens, earners, and as individuals, integrated personalities in their own right.
Myrdal, Alva Klein, Viola	Women's Two Roles N. Y., Humanities Press, 1956. $5.00 A study of the changes in the educated woman's life as a result of expanding career opportunities, the need and desire to work, and the mechanization of housework.
National Manpower Council	Womanpower N. Y., Columbia University Press, 1957. $5.00 Work in the Lives of Married Women N. Y., Columbia University Press, 1958. $4.75 Results of the conferences of the National Manpower Council called by President Eisenhower, probing such areas as education for re-entry into the labor force, employment problems peculiar to women, the extent to which women are indispensible to the national economy, and effects upon children of their mother's outside employment.

Nye, F. Ivan Hoffman, Lois	The Employed Mother in America Chicago, Rand McNally, 1963. $6.00 Professor Robert Blood of the University of Michigan is one of the contributors to this book which is based on very recent research.
O'Neill, Barbara Powell	Careers for Women After Marriage and Children N. Y., The Macmillan Co., 1965. $5.95 The training required for positions in areas of current need: remedial reading, rehabilitation counseling, city planning, landscape architecture, engineering, etc. Specific advice on the problems of returning to school and career.
President's Commission on the Status of Women	Report of American Women Washington, D.C., Supt. of Documents, U. S. Gov't. Printing Office. October, 1963. The report of the commission which was appointed by President John F. Kennedy to look into the development of women's potential in making fuller use of their abilities in order to enhance the quality of American life.
Schwartz, Jane	Part-Time Employment: Employer Attitudes on Opportunities for the College-Trained Woman. 541 Madison Ave., N. Y. City, N. Y. Alumnae Advisory Center, Inc., 1964. $1.00 This booklet, which considers the interests of the employer, should be a helpful guide to the woman seeking part-time employment. Based on interviews in the New York area with representatives from organizations in five broad fields of employment, an effort was made to discover the full scope of attitudes on part-time employment.
White, Martha S.	The Next Step - A Guide to Part-Time Opportunities in Greater Boston for the Educated Woman. 78 Mount Auburn St., Cambridge,

	Mass., The Radcliffe Institute for Independent Study, 1964. $1.50 Suggestions for other areas as well as Boston; references to many other pertinent booklets.
Winter, Elmer	A Woman's Guide to Earning a Good Living. N. Y., Simon & Schuster, 1961. $4.95 This book offers advice on studying your own situation prior to seeking a job, analyzes the seven groups of women who work, provides a step by step guide to aid you in looking for work, lists the fields which offer the best employment opportunities for women, and gives information on self-employment opportunities. Real life examples illustrate the point Mr. Winter makes.
Women's Bureau U. S. Dept. of Labor	Handbook on Women Workers Washington, D. C., Supt. of Documents, Bulletin 285, 1964. 55¢ Basic information concerning women's employment and occupations, age and marital status, earnings and income, education, and state laws affecting their status.
	Job Horizons for College Women in the 1960's. Washington, D. C., Supt. of Documents, U. S. Government Printing Office, Bulletin 288, 1964. 30¢ Describes briefly the many careers open to college women; indicates the educational and training requirements for the professions.

PERIODICALS - General Information

American Association of University Women Journal	Occupations for Women, The Coming Revolution, by John B. Parrish. 57:132-135. March, 1964.
	Accent on the Qualified-Women's Job Prospects, by Jean A. Wells. 58:18-24. October, 1964.

American Scholar	An American Anachronism, the Image of Women and Work, by Ellen and Kenneth Keniston. Summer 1964.
Association of American Colleges.	How to Educate a Woman's Husband. Bulletin 43, 1957. 274-85.
Harper's Magazine	American Female: Symposium. 225:117-80, October, 1962.
	Second Chance: New Education for Women, by Esther Raushenbush. 225:147-52, October, 1962.
Higher Education	Higher Education for Women: Time for Reappraisal, by Eleanor F. Dolan. September, 1963.
Journal of the National Association of Women Deans and Counselors	The Comparative Academic Achievement of Young and Old, by Irma T. Halfter. 25:60-7, January, 1962. (Changing Patterns in the Higher Education of Women—subject of this entire issue.)
	Some Attitudes and Opinions of Employed Women, by Glenn V. Ramsey. 26:30-36, April, 1963.
Ladies Home Journal	Where the Jobs Are, by Bernard Ashbell. 81:78, June, 1964.
Saturday Review	Education of Women: Symposium Discussion. 46:61, 64-70, May 18, 1963 46:60, June 15, 1963
	Will Science Change Marriage? by J. Lear. 47:75-7, December 5, 1964.
Science Digest	Surprising Facts About Women, Work and Marriage. 54:79-82, October, 1963.
Trans-Action	A Good Woman is Hard to Find, by Alice S. Rossi. 2:20-3, November-December, 1964.

PERIODICALS - Vocational Information

Electronics World	Let's Woo the Woman Engineer, by W. A. Stocklin. 40:6, July, 1963.
National Business Woman	Engineers in Skirts, by Emma C. Barth. 40:6-7, February, 1961.
Science Digest	More Women Needed to Aid Dentists' Work. 52:59-60, November, 1962.

BOOKS - Vocational Information

Baker, Elizabeth Faulkner	Technology and Women's Work. N. Y., Columbia University Press, 1964. $8.50
Chamberlin, Jo Hubbard	Careers for Social Scientists. N. Y., Henry Z. Walck, Inc., 1961. $3.50.
Clarke, Joan D.	Your Future as a Librarian. N. Y., Richards Rosen Press, 1963. $2.95
Frost, Jane C.	Your Future in Dental Assisting. N. Y., Richards Rosen Press, 1964. $2.95
King, Alice	Career Opportunities for Women in Business. N. Y., Dutton, 1963. $4.50
Kraemer, James	Your Future in Pharmacy. N. Y., Richards Rosen Press, 1964. $2.95
Lewis, Edith Patton	Nurse: Careers Within a Career in Professional Nursing. N. Y., Macmillan, 1962. $3.50
Paul, Grace	Your Future in Medical Technology. N. Y., Richards Rosen Press, 1962. $2.95
Perlman, Helen	So You Want to Be A Social Worker. N. Y., Harper, 1962. $3.50

Schalenben, Arville	Your Future in Journalism. N. Y., DC-3-Popular Library, 1961. Paperback 50¢
Shuff, Frances L.	Your Future in Occupational Therapy. N. Y., Richards Rosen Press, 1964. $2.95
Thompson, Wm. E., Jr.	Your Future in Nuclear Energy Fields. N. Y., CD-9-Popular Library. Paperback 50¢
Wachs, Theodore, Jr.	Careers in Research Science. N. Y., Henry Z. Walck, Inc., 1961. $3.50
Wynn, Richard	Careers in Education. N. Y., McGraw-Hill, 1960. $4.95

BOOKLETS - Presenting Specific Occupational Information

The following are available at a small cost, and may be sent for by mail. Pamphlets briefly covering these fields are on the tables in each panel discussion room.

Prentice-Hall, Inc.	Teaching: A National Directory of Preparatory Programs for Women College Graduates. Paperback book prepared by Catalyst, a new national organization concerned with assisting women college graduates who wish to combine family and career, in finding access to educational and vocational opportunities. 10 East End Avenue, New York, N.Y. 10021. 1964.
	Teaching: Opportunities for Women College Graduates. 10 East End Avenue, New York, N. Y. 10021. 1964. Catalyst.
Future Business Leaders of America	A Career in Data Processing, by Mary Robek, 1964. 1201 Sixteenth St., N.W., Washington, D.C., 20036. 10¢
American Hospital Association	Careers in Hospitals. 840 N. Lake Shore Drive, Chicago 11, Illinois. $1.05

New York University Press	Careers for English Majors, by Ruth Middlebrook, 1963. Washington Square, N. Y. 3, N. Y. 60¢
Women's Bureau U. S. Dept. of Labor	Careers for Women in the Biological Sciences, 1961. Washington, D. C. 20402, Supt. of Documents, U. S. Govt. Printing Office. 40¢
	Careers for Women as Life Underwriters, 1961. Washington, D. C. 20402, Supt. of Documents, U. S. Govt. Printing Office. 20¢
	Careers for Women in the Physical Sciences, 1959. Washington, D. C. 20402, Supt. of Documents, U. S. Govt. Printing Office. 40¢
	Careers for Women in Retailing, 1963. Washington, D. C. 20402, Supt. of Documents, U. S. Govt. Printing Office. 25¢
Institute for Research	Careers in Public Relations Work, 1961. 537 S. Dearborn, Chicago 5, Illinois.
	Careers in Radio, 1964. 537 S. Dearborn, Chicago 5, Illinois.
American Statistical Association	Careers in Statistics, 1963. 810 18th St., N.W., Washington, D.C. 20006
American Chemical Society	The Chemical Profession, 1960. 1155 16th St., N.W., Washington 6, D.C. 25¢
U. S. Dept. of Labor U. S. Employment Service	Choosing Your Occupation, 1962. Washington, D. C. 20402, Supt. of Documents, U. S. Govt. Printing Office. 15¢
Michigan Employment Security Commission	Computer Occupations, (No. 26), 1960. 7310 Woodward Ave., Detroit 2, Mich.
U. S. Atomic Energy Commission	Employment Opportunities in the Atomic Field, 1962. P. O. Box 62, Oak Ridge, Tennessee. 50¢

Engineers' Council for Professional Development	Engineering, A Creative Profession, by A. B. Bronwell and Z. G. Duetsch, 1962. 345 E. 47th St., New York, N.Y.
Occupational Outlook Quarterly	Foreign Languages on the Job. Volume 8, #3.
Public Affairs Pamphlet	Jobs and Future in Mental Health Work, by Elizabeth Ogg. Pamphlet No. 296. 381 Park Ave. South, N. Y. 10016. 25¢
National Health Council	New Careers in the Health Sciences. 1961. Single copy free. 1790 Broadway, New York 19, N.Y.
U. S. Dept. of Health, Education & Welfare	Teaching As a Career, 1963. Washington, D. C. 20402, Supt. of Documents, U. S. Government Printing Office. OE-26014, Pamphlet No. 122, 20¢
Bellman Publishing Co.	Technical Writing as a Career, by Allan Lytel, 1961. P. O. Box 172, Cambridge 38, Mass. $1.00
Journal of American Bankers' Association	Your Career in Banking, 1958. 12 E. 36th St., New York 16, N.Y.

PERSONNEL ASSISTING IN THE CONFERENCE

The staff of the Center gratefully acknowledges the generous contribution made by faculty members and guests who participated in the "Opportunities for Women through Education" Conference-Workshop, and the help and continuing support of the following people:

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Mrs. Allen Britton, Faculty Women's Club
Dr. Louella Cable, Business and Professional Women's Club
Mrs. Ralph Kleinman, League of Women Voters
Mrs. Joseph Kummer, American Association of University Women
Mrs. Brymer Williams, University of Michigan Alumnae Council

Bibliography and Vocational Information

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Workshop Sessions in the Rackham Building

Education

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Hostesses: Mrs. Harlan Bloomer, Mrs. Clark Hopkins
Recorders: Mrs. Ned A. Flanders, Mrs. John E. Milholland

Social Work

Location: West Conference Room 4th Floor
Hostess: Mrs. Jay A. Bolt
Recorders: Mrs. Melvin Manis, Mrs. Wilbur Nelson

Health Sciences

Location: West Lecture Room, 3rd Floor
Hostess: Mrs. Marston Bates
Recorders: Mrs. Stanford C. Ericksen, Mrs. Charles Lipson

Library Science

Location: East Conference Room, 4th Floor
Hostess: Mrs. George Cameron
Recorders: Mrs. Harold F. Allen, Mrs. Philip E. Converse

Math, Physical Sciences, Engineering

Location: East Lecture Room, 3rd Floor
Hostess: Mrs. J. W. Daily
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Liberal Arts Programs for Undergraduates

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General University Information

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Conference planned in cooperation with the University of Michigan Extension Service.

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